THE ILLUSTRATED LONDON ALMANACK

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INTRODUCTION.

It is now five years since the First Volume of the Illustrated London Almanack for the year 1845 was published; and this Volume is the fifth of the series. We avail ourselves of the opportunity which the occasion affords, of expressing our grateful acknowledgements to many Correspondents who have kindly suggested improvements; and assure them that their several wishes have been attended to, as far as our space affords. This Volume will be found to contain fully the usual variety of information.

The Illustrations heading the Calendars are from the pencil of Richard Doyle, Esq., and are engraved by Dalziel.

The Calendar and Second Page of every Month, as well as all relating to Astronomy, Meteorology, and Science, have been under the superintendence of James Glaisher, Esq. F.R.A.S., and of the Royal Observatory at Greenwich.

The Illustrations on the Third and Fourth Pages of every Month are from the pencil of B. Foster, Esq., and engraved by Vizitelly.

The Whole of the matter contained in the Third and Fourth Pages of every Month is from the very able pen of the well-known writer upon Country Scenes, &c., Thomas Miller, Esq.

The remarks upon Gardening are from the well-known Authoress, Mrs. Loudon; and the Domestic Hints are by M. Soyer.

We deem it unnecessary to repeat the explanations which we have already given in the Introduction to the preceding Volumes, as they apply equally well to this; and shall, therefore, only notice the additional explanations required by the additional information.

Calendarial Pages.—The time the Sun souths is given every day, in common clock time, or the time a watch or clock should shew, when the Sun is on the meridian or due south. In preceding Volumes these numbers were given under the head of "Equation of Time;" and they can be used as directed in those Volumes, by considering that "After 12 o'clock" is equivalent to Add, and "Before 12 o'clock" is equivalent to Subtract.

The altitudes of the Sun and Moon, when due South at London, whose latitude is 51½°, are given every day. These numbers will answer equally well for any other place, by taking into account the difference of latitude between London and that place. At all places whose latitude is the same as at London, no alteration is needed; at those places situated N. of London, the numbers are to be decreased; and at places situated S. of London, they are to be increased. Thus the latitude of Edinburgh is 56° nearly, being 4½° nearly N. of London; and if the numbers in this Almanack be diminished by 4½°, they would give the altitudes of the Sun and Moon above the horizon, when they are on the meridian of Edinburgh.

THE THERMOMETER.

This instrument was invented about the beginning of the 17th century, and is still one of the most important instruments used in Natural Philosophy. By its means it is ascertained that all bodies, on being heated, increase in volume, in a different proportion for each. The change is scarcely visible in solid bodies, and they, as well as liquids, expand unequally by equal increments of heat. Mercury approaches more nearly to equality in its rate of expansion, and remains liquid through a longer range of temperature, and is, therefore, justly preferred to water, oil, alcohol, &c., for thermometric purposes. A common thermometer is a tube of very small diameter, terminating at one of its ends by a cylindrical reservoir, so that very minute expansions of the mercury in the reservoir or bulb may be rendered perceptible. In order to obtain the value of these variations, a graduated scale is fixed along the tube. These scales, unfortunately, are different in different countries—to be spoken of presently. In order, however, that each observer may trace these divisions himself, it was necessary that two points of invariable temperature should be determined; and after a long time, and many attempts, it was found that the temperatures of water just freezing and water boiling were always the same. Both these points, however, were long disputed; and even late in last century it was believed that water at Naples began to freeze when the thermometer was 10 degrees above the freezing point, as shewn by a thermometer constructed in England by the directions of the Royal Society (see Dr. Cyrilli's papers in the "Philosophical Transactions," No. 424, page 336; No 430, page 189; No. 434, page 407, 408). The fixedness of the freezing point was at last established, and the erroneous idea was abandoned, that be further north, the greater degree of cold it took to freeze water. The subject occupied the attention of M. Amontons (see Mémoires de l'Académie, 1702, page 204, &c.), Mr. Boyle (see his Experiments on Cold), Dr. Halley, Newton, Dr. Derham, &c., and ultimately the fixedness of the boiling point of water was determined, by taking into account the varying pressure of the atmosphere. Thus this beautiful instrument was perfected.

Thermometers used for meteorological researches are wholly surrounded by the atmosphere, and therefore the mercury in both the stem and bulb are affected by the temperature of the air. The bulbs of those used for chemical purposes are generally only plunged into the liquid. The portion of the stem not immersed in the liquid is not influenced by the heat; and, therefore, the scales of both meteorological and chemical thermometers ought to be graduated differently: the former should be totally immersed in boiling water, whilst the bulb of the latter only should be so immersed, on determining the values of their scales.

At the Royal Observatory, Greenwich, several thermometers have been read at every even hour, both night and day, during the years 1841 to 1847, excepting on Sundays, Good Fridays, and Christmas-days; and the following are the monthly values of the temperature of the air, as compiled from the published volumes of the Greenwich Observations, and the Registrar-General's Reports:—

MONTHLY MEAN TEMPERATURE OF THE AIR AT GREENWICH.

Months.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January	33·6*	32.9	39.9	39.1	38·3	43·7	37.0
February	35.3	40.8	36·0	35·2	32·7	43·9	35·5
March	46.2	44.9	42·9	41.5	35·2	43·3	41·4
April	47·0	45·2	47.1	51·7	46·3	47.1	45.3
May	56.8	53·2	52·2	52·9	49.4	54·6	56·4
June	56.4	62·9	56.3	60·7	60.7	65.2	58·0
July	57·8	60·2	60·9	61·4	59.8	64·5	65·4
August	60·5	65.4	62.1	57·7	57·3	63.2	62·1
September ..	58.1	56.4	59.5	56·9	53.6	60.1	54·3
October.....	48.8	45·4	48.0	49·5	50·2	50·5	52.9
November ..	42·7	42·8	43.8	44.0	45·8	46.0	46·9
December....	40.5	45.0	43.9	33·0	41·7	32.9	42.8

The mean temperatures for the years 1841 to 1847 are 48°7, 49°6, 49°4, 48°6, 47°6, 51°3, and 49°5 respectively.

The following table shows the *highest observed temperature* in each month:—

Months.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January	53.0	46.8	57.0	53.7	51.3	55.3	52.7
February	54.6	53.2	51.9	50.4	48.5	62.3	55.0
March	66.9	60.5	63.7	60.2	59.4	58.0	64.2
April	76.5	73.7	70.8	74.9	70.3	63.0	63.8
May	82.8	74.7	69.5	77.4	68.2	84.3	86.2
June	78.5	87.4	79.3	87.6	86.0	91.1	80.4
July	76.0	78.8	89.8	87.4	83.3	92.3	89.0
August	79.6	90.5	82.8	75.4	77.8	92.0	87.3
September ..	79.6	75.8	79.9	78.0	73.5	86.4	72.5
October.....	64.6	60.9	70.4	67.4	67.6	67.7	73.2
November....	58.3	55.9	57.5	58.1	59.6	61.5	66.3
December....	53.9	58.2	54.7	49.3	55.5	49.9	59.5

* It will be borne in mind that in reading these numbers the figure to the right of the point shows the number of tenth parts of one degree; therefore, the number ranging with January, 1841, is to be read 36 degrees, and 6 tenths of a degree, and so for all the other numbers.

The following table shows the *lowest observed temperature* every month:—

Months.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January	4.0	23.2	24.0	18.8	24.4	29.4	23.0
February	12.4	26.4	20.3	20.0	7.7	26.9	10.2
March	29.5	29.9	26.5	24.1	13.1	26.5	16.9
April	31.8	28.0	27.2	33.4	29.5	33.3	27.0
May	41.2	36.4	37.3	33.9	34.4	38.3	36.0
June	40.3	44.7	42.9	43.4	43.8	49.4	41.0
July	44.3	45.5	44.6	47.1	44.6	49.1	45.4
August	45.5	47.5	47.2	42.8	43.2	47.5	42.0
September ..	36.6	41.1	34.0	34.8	33.4	39.2	32.0
October.....	32.2	28.3	28.5	30.8	31.4	35.0	33.0
November....	22.6	31.1	27.4	27.4	29.1	23.4	24.5
December....	24.3	30.8	25.6	21.1	28.0	18.8	25.0

For the other Meteorological elements belonging to an English year, we refer to the article on Meteorology in last year's Almanack, and to the Eighth Annual Report of the Registrar-General, recently published.

ON THE GRADUATION OF THE SCALES OF THERMOMETERS.

The graduation of Fahrenheit is used by the English; that of Reaumur by the Germans; that of Celsius by the French, calling it *thermomètre centigrade*; and that of De Lisle by the Russians. The following are the readings for the freezing and boiling points of water upon those scales:—

	Fahr.	Reaumur.	Centigrade.	De Lisle.
Freezing points	32°	0°	0°	150°
Boiling points	212°	80°	100°	0°

Therefore, the number of degrees included between the freezing and boiling points of water, in Fahrenheit's scale, is 180°; in Reaumur's, 80°; in the centigrade, 100°; and in De Lisle, is 150°. So that 9° of Fahrenheit, 4° of Reaumur, 5° centigrade, and 7½° of De Lisle are equal to each other. One degree upon Fahrenheit's scale is therefore the smallest, and one on that of Reaumur's is the largest.

The division "0°" on all the scales is called Zero; and the degrees graduated below this point are called *minus*, and have the minus sign (—) affixed to them.

In the Reaumur and centigrade scales, whose Zeros are at the freezing point of water, great care is necessary to be paid, to prevent the readings below Zero being mistaken for those above.

Different countries, adopting these different scales, cause a great deal of trouble; and is a fruitful source of error in comparing the temperature of different places, as registered by these differently graduated instruments. It is much to be desired, that all nations would use one and the same scale; but there is no hope of this being done.

As these different scales exist, it is desirable to have a ready means of converting a reading of one of these scales into its equivalent reading in another; and this may be done by the following rules:—

To reduce Fahrenheit's scale to Reaumur's, when the reading is above 32°.—Take 32° from the reading, multiply the difference by 4, and divide the product by 9.

To reduce Fahrenheit's scale to Reaumur's, when the reading is below 32°.—Take the reading from 32°, multiply the difference by 4, divide the product by 9, and affix the minus sign (—).

To reduce Reaumur's scale to that of Fahrenheit, when the reading is above the freezing point.—Multiply the reading by 9, divide the product by 4, and add 32° to the quotient.

To reduce Reaumur's scale to that of Fahrenheit, when the reading is below the freezing point.—Multiply the reading by 9, divide the product by 4, and take the quotient from 32°.

To reduce Fahrenheit's reading to Centigrade, when the reading is above the freezing point.—Take 32° from the reading, multiply the difference by 5, and divide the product by 9.

To reduce Fahrenheit's reading to Centigrade, when the reading is below the freezing point.—Take the reading from 32°, multiply the difference by 5, divide the product by 9, and affix the minus sign (—)

To convert the readings of the Centigrade scale into those of Fahrenheit.—Proceed exactly as in the case of Fahrenheit into Reaumur, except using 5 instead of 4.

To reduce Reaumur's scale to that of the Centigrade.—Multiply by 5, and divide the product by 4.

To reduce the Centigrade scale to that of Reaumur.—Multiply the reading by 4, and divide the product by 5.

As the French tables and observations of temperature are those which most frequently come under our notice, it is desirable that a simple mental calculation should suffice. The following rule is the one we use to convert, in a moment, all readings of the centigrade scale into their equivalent values in Fahrenheit's scale; viz. double the centigrade degrees, and deduct one-tenth of the product, adding 32° if the temperature is above the freezing point, or subtracting the product from 32° if below.

ON THE CALENDAR.

THE PRINCIPAL ARTICLES OF THE CALENDAR, FOR THE YEAR OF OUR LORD 1849.

	Gregorian, or New Calendar.	Julian or Old Calendar.
Dominical Letters	G	B
Golden Number	7	7
Roman Indiction	7	7
Solar Cycle	10	10
Epact	6	17

(For remarks upon these articles, see the Almanack for the year 1847.)

CORRESPONDENCE OF THE YEAR 1849 WITH ANCIENT ERAS.

Being, till September 16th, the latter part of the 5609th, and from September 17th the beginning of the 5610th year since the creation of the world, according to the Jews.

Being the 6562nd year of the Julian Period.

Being the 2602nd year since the Foundation of Rome (according to Varro).

Being the 2596th year since the era of Nabonasser, which has been assigned to Wednesday, the 26th of February, of the 3967th year of the Julian Period, which corresponds, according to chronologists, to the 747th, and, according to astronomers, to the 746th year before the birth of Christ.

Being the 2625th year of the Olympiads, or the first year of the 657th Olympiad will begin in July, 1849, if we fix the era of the Olympiads at 775½ years before Christ, or at or about the beginning of July of the year 3938 of the Julian Period.

Being the latter part of the 1265th, and the beginning of the 1266th year (of twelve lunations) since the Hegira, or flight of Mahomet, which it is generally supposed took place on the 18th of July, in the year 622 of the Christian era. The year 1265 commenced on the 27th of November, 1848, and ends the 16th of November, 1849.

CALENDAR OF THE JEWS FOR THE YEAR 1849.

5609.		1848.		NEW MOONS AND FEASTS.
Tebeth ..	1	December ..	26	Rosh Hodesh, or New Moon
		1849.		
Tebeth ..	10	January ..	4	Fast: Siege of Jerusalem
Schebat ..	1	„	24	
Adar ..	1	February ..	23	
„	13	March ..	7	Fast of Esther
„	14	„	8	Feast of Purim
„	15	„	9	Schuschan Purim
Nisan ..	1	„	24	
„	15	April ..	7	Passover begins*
„	16	„	8	Second day*
„	21	„	13	Seventh day*
„	22	„	14	Passover ends*
Ijar ..	1	„	23	
„	18	May ..	10	Lag Beomer
Sivan ..	1	„	22	
„	6	„	27	Pentecost Holidays, Feast of Weeks*
„	7	„	28	Second day *
Tamuz ..	1	June ..	21	
„	17	July ..	7	Fast: Seizure of the Temple by Titus*
Ab ..	1	„	20	
„	9	„	28	Fast: Destrnction of the Temple*
Elul ..	1	August ..	19	
„	7	„	25	Dedication of the Walls hy Nehemiah
„	17	September ..	4	Expulsion of the Greeks
5610.				
Tisri ..	1	„	17	Feast for the New Year*
„	2	„	18	Second Feast for the New Year*
„	3	„	19	Fast of Gedaliah
„	10	„	26	Fast of the Reconciliation or Atonement*
„	15	October ..	1	Feast of the Huts or Tabernacles*
„	16	„	2	Second Feast of the Tabernacles*
„	21	„	7	Feast of Palms or Branches*
„	22	„	8	End of the Hut, or Congregation Feast*
„	23	„	9	Rejoicing for the discovery of the Lord*
Marchesvan ..	1	„	17	
Kislev ..	1	November ..	16	
„	25	December ..	10	Consecration of the Temple
Teheth ..	1	„	16	
„	10	„	25	Fast for the Siege of Jerusalem

The Anniversaries marked with an asterisk (*) are to be strictly observed.

The Jewish Year generally contains 354 days, or 12 Lunations of the Moon; but, in a cycle of 19 years, an intercalary month (Veadar) is 7 times introduced, for the purpose of rendering the average duration of the year quite or nearly correct.

MOHAMMEDAN CALENDAR FOR THE YEAR 1849.

Hegiri;	1265,	Moharrem 1	(New Year)	falls on November 27, 1848.
„	„	Safar 1	„	„ December 27, „
„	„	Rebi-el-Awwel 1	„	„ January 25, 1849.
„	„	Rebi-el-Accher 1	„	„ February 24, „
„	„	Dschemâdi-el-Awwel 1		„ March 25, „
„	„	Dschemâdi-el-Accher 1		„ April 24, „
„	„	Redschebl	„	„ May 23, „
„	„	Schâban 1	„	„ June 22, „
„	„	Ramadan 1	Month of Abstinence observed by the Turks	July 21, „
„	„	Schewâl 1	„	„ August 20, „
„	„	Dsú'l-Kade 1	„	„ September 18, „
„	„	Dsú'l-hedsché 1	„	„ October 18, „
Hegiri;	1266.	Moharrem	„	„ November 17, „
„	„	Safar 1	„	„ December 17, „

(For remarks on the Mohammedan year, see the Almanack of last year.)

SIGNS OF THE ZODIAC.

Spring Signs	1 ♈ Aries	Autumn Signs	7 ♎ Libra
	2 ♉ Taurus		8 ♏ Scorpio
	3 ♊ Gemini		9 ♐ Sagittarius
Summer Signs	4 ♋ Cancer	Winter Signs	10 ♑ Capricornus
	5 ♌ Leo		11 ♒ Aquarius
	6 ♍ Virgo		12 ♓ Pisces

FIXED AND MOVEABLE FESTIVALS, ANNIVERSARIES, &c.

Epiphany	Jan.	6	*Pentecost—Whit Sunday* ..		27
Martyrdom of King Charles I.	„	30	Restoration of King Chas. II.		29
Septuagesima Sunday ..	Feb.	4	*Trinity Sunday*	June	3
Quinquagesima—Shrove Sun.	„	18	*Corpus Christi*	„	7
Ash Wednesday	„	21	Accession of Queen Victoria	„	20
Quadragesima—1st Sunday in Lent	„	25	Proclamation	„	21
			St. John Baptist—Midsummer Day	„	24
St. David	March	1			
St. Patrick	„	17	Birth of Dowager Queen Adelaide	Aug.	13
Annunciation—Lady Day	„	25			
Palm Sunday	April	1	St. Michael—Michaelmas Day	Sep.	29
Good Friday	„	6	Gunpowder Plot	Nov.	5
EASTER SUNDAY	„	8	Birth of Prince of Wales ..	„	9
Low Sunday	„	15	Birth of Prince Albert ..	„	26
St. George	„	23	St. Andrew	„	30
Rogation Sunday	May	13	*1st Sunday in Advent* ..	Dec.	2
Ascension Day—Holy Thursday	„	17	St. Thomas	„	21
Birth of Queen Victoria ..	„	24	Christmas Day	„	25

BEGINNING OF THE SEASONS, 1849.

				D.	H.	M.
The Sun enters	Capricornus	(Winter begins)	1848, Dec.	21	4	0
„	Aries	(Spring begins)	1849, March	20	5	13
„	Cancer	(Summer begins)	„ June	21	2	8
„	Libra	(Autumn begins)	„ Sept.	22	16	3
„	Capricornus	(Winter begins)	„ Dec.	21	9	42

DURATION OF THE SEASONS, AND THE YEAR 1849.

The Sun will be in the	Winter	signs	89 Days	1 Hour	13 Minutes		
„	Spring	„	92 „	20 „	55 „		
„	Summer	„	93 „	13 „	55 „		
„	Autumn	„	89 „	17 „	39 „		
			D.	H.	M.	°	′ ″
The Sun will be on the Equator and going N.	1849, March		20	5	13, his declination being	0	0 0
The Sun will reach his greatest N. declination	1849, June		21	2	8, his N. declin. being	23	27 23
The Sun will be on the Equator, and going S.	1849, Sept.		22	16	3, his declination being	0	0 0
The Sun will be at his greatest S. declination	1849, Dec.		21	9	42, his S. declin. being	23	27 23

The Sun will be North of the Equator (Spring and Summer) 186 days 10 hours 50 minutes.

The Sun will be South of the Equator (Winter and Autumn) 178 days 18 hours 52 minutes.

The length of the tropical year, commencing at the Winter Solstice 1848, and terminating at the Winter Solstice 1849, is 365 days 5 hours 42 minutes.

ASTRONOMICAL SYMBOLS AND ABBREVIATIONS EXPLAINED.

⊙ The Sun	⚷ Iris	° Degrees
● New Moon	⚵ Astrea	′ Minutes of Arc
☽ First Quarter of Moon	⚶ Flora	″ Seconds of Arc
○ Full Moon	⚷ Metis	D. Days
☾ Last Quarter of Moon	♃ Jupiter	H. Hours
☿ Mercury	♄ Saturn	M. Minutes of Time
♀ Venus	♅ Uranus	S. Seconds of Time
⊕ or ♁ The Earth	♆ Neptune	☉ Sunday
♂ Mars	☊ Ascending Node	☽ Monday
⚶ Vesta	☋ Descending Node	♂ Tuesday
⚵ Juno	N. North	☿ Wednesday
⚴ Pallas	E. East	♃ Thursday
⚳ Ceres	S. South	♀ Friday
⚷ Hehe	W. West	♄ Saturday

The Symbol ☌ Conjunction, or having the same Longitude or Right Ascension.
„ □ Quadrature, or differing 90° in Longitude or Right Ascension.
„ ☍ Opposition, or differing 180° in Longitude or Right Ascension.

(For explanation of Astronomical terms, see Almanack of last year.)

LAW TERMS, 1849.

As Settled by Statutes 2 George IV., 1 William IV., cap. 70, s. 6 (passed July 23rd, 1830), and 1 William IV., cap. 3, s. 2 (passed December 23rd, 1830).

Hilary Term	Begins January	11	Ends January	31
Easter Term	„ April	15	„ May	8
Trinity Term	„ May	22	„ June	12
Michaelmas	„ Nov.	2	„ Nov.	26

UNIVERSITY TERMS, 1849.

OXFORD.

TERMS.	BEGINS.	ENDS.
Lent	January 15	March 31
Easter	April 18	May 26
Trinity	May 30	July 7
Michaelmas	October 10	December 17

The Act, July 3.

CAMBRIDGE.

TERMS.	BEGINS.	DIVIDES.	ENDS.
Lent	Jan. 13	Feb. 20, Noon	March 30
Easter ..	April 18	May 27, Midnight	July 6
Michaelmas ..	Oct. 10	Nov. 12, Midnight	Dec. 16

The Commencement. July 3.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon.	MOON. Height above horizon	MOON. Sets. Afternoon	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon.	Day of the Year.
			H. M.	H. M.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	M	*Circumcision*, being the eighth day after the nativity of Jesus Christ, who was circumcised when the eight days were accomplished, according to the law of the Jews.	8 8	3 58	15½	4 0	11 28	5 32	37½	11 48	7	6 10	6 35	1
2	Tu		8 8	4 26	15½	4 1	11 54	6 22	42	Morning.	☽	6 58	7 25	2
3	W		8 8	4 54	15¾	4 2	Afternoon	7 14	46½	1 1	9	7 55	8 25	3
4	Th		8 8	5 21	15¾	4 3	0 55	8 9	50½	2 18	10	9 2	9 36	4
5	F		8 8	5 48	16	4 4	1 32	9 6	53¾	3 34	11	10 15	10 54	5
6	S	*Epiphany*. Tw.D	8 7	6 14	16	4 6	2 17	10 6	55¾	4 50	12	11 30	At Midnight.	6
7	S	1st S. aft Epiph.	8 7	6 40	16¼	4 7	3 12	11 7	56½	6 0	13	No Tide.	0 32	7
8	M	*Lucian*. Pl. Mon.	8 7	7 6	16¼	4 8	4 14	Morning.	55¾	7 2	●	1 0	1 30	8
9	Tu	[burnt 1838	8 6	7 31	16½	4 9	5 24	0 8	53¾	7 56	15	1 55	2 20	9
10	W	Royal Exchange	8 6	7 55	16½	4 10	6 36	1 7	50¾	8 41	16	2 45	3 10	10
11	Th	Hilary Term beg.	8 5	8 19	16¾	4 11	7 48	2 2	47¼	9 17	17	3 35	3 55	11
12	F	Polaris souths at 5h. 37m. P.M.	8 4	8 42	17	4 13	9 0	2 54	43	9 48	18	4 17	4 40	12
13	S	Camb. Term beg.	8 3	9 5	17	4 14	10 8	3 43	39	10 15	19	5 0	5 20	13
14	S	2d S. aft. Epiph.	8 2	9 27	17¼	4 16	11 16	4 29	34¾	10 39	20	5 40	6 0	14
15	M	Ox. Term begins	8 2	9 48	17½	4 18	Morning.	5 14	30¾	11 4	21	6 20	6 45	15
16	Tu	Alpha Arietis souths at 6h. 15m. P.M.	8 1	10 8	17½	4 19	0 20	5 58	27¼	11 27	☾	7 5	7 25	16
17	W	Alpha Ceti souths at 7h. 6m. P.M.	8 0	10 28	17¾	4 21	1 23	6 42	24¼	11 53	23	7 50	8 20	17
18	Th	*Prisca*. Old T. D.	7 59	10 48	18	4 22	2 26	7 26	21¾	Afternoon	24	8 55	9 30	18
19	F	Copernic. b. 1472	7 58	11 6	18¼	4 24	3 26	8 11	20	0 51	25	10 5	10 40	19
20	S	*St. Fabian*	7 57	11 24	18½	4 26	4 23	8 58	19	1 28	26	11 15	11 50	20
21	S	3d S. aft. Epiph.	7 56	11 41	18¾	4 27	5 18	9 45	19	2 11	27	No Tide.	0 20	21
22	M	*St. Vincent*	7 55	11 57	19	4 29	6 8	10 34	19¾	3 1	28	0 44	1 7	22
23	Tu	Aldebaran souths at 8h. 15m. P.M.	7 54	12 13	19¼	4 31	6 52	11 24	—	3 59	29	1 28	1 50	23
24	W	Pitt died 1806	7 53	12 28	19½	4 33	7 34	Afternoon	21½	5 2	○	2 10	2 27	24
25	Th	*Convers. St. Paul*	7 51	12 42	19½	4 35	8 8	1 3	24¼	6 4	1	2 45	3 5	25
26	F	Capella souths at 8h. 42m. P.M.	7 50	12 55	19¾	4 37	8 45	1 52	27¾	7 14	2	3 20	3 40	26
27	S	Sirius souths at 10h. 10m. P.M.	7 48	13 7	20	4 39	9 7	2 41	31¾	8 25	3	3 57	4 15	27
28	S	4th. S. aft Epip.	7 47	13 19	20¼	4 40	9 34	3 20	36	9 37	4	4 35	4 50	28
29	M	[Charles I.	7 45	13 29	20¾	4 41	10 1	4 20	40½	10 51	5	5 10	5 30	29
30	Tu	Martyr. of King	7 44	13 39	21	4 43	10 28	5 10	45	Morning.	6	5 50	6 10	30
31	W	Hilary Term ends	7 43	13 48	21¼	4 45	10 59	6 3	49	0 4	☽	6 35	7 0	31

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 2h. 4h. 6h. | After Sunset. O'Clock. 6h. 8h. 10h.

JANUARY.

The Sun is in the sign Capricornus (the Goat) till the 20th, on which day, at 2h. 21m. A.M., he enters the sign Aquarius (the Water-bearer). On the 2nd day, at 2h. 6m. A.M., he is the nearest to the Earth during the year, and is distant 93,407,000 miles. He *rises* on the 1st, at 2° S. of the S.E. by E.; on the 15th, at the S.E. by E.; and on the last day, at 5°¼ S. of the E.S.E. He *sets* on the same days at 2° S. of S.W. by W., at the S.W. by W., and at 5°¼ S. of the W.S.W. points of the horizon respectively. His time of southing, in common clock time, and his height in degrees at the same time, are shown every day on the opposite page.

The Moon is in the constellation Cetus on the 1st; on the boundaries of Cetus and Pisces on the 2nd; in that of Cetus again on the 3rd and 4th; in Taurus on the 5th and 6th; on the 7th, at noon, she passes into Gemini; and on the 9th into Cancer; on the 11th and 12th she is in Leo; from the 13th to the 16th, in Virgo; on the 17th and 18th, in Libra; 19th and 20th, in Ophiuchus; on the 21st and 22nd, on the boundaries of Aquila and Sagittarius; on the 23rd, in Sagittarius; 24th, in Capricornus; the 25th and 26th, in Aquarius; in Pisces on the 27th and 28th; on the 29th and 30th, skirting Pisces and Cetus; and in Cetus on the 31st.

She *rises* between the times of sun-setting and sun-rising, or during the night, from the 8th to the 24th; and during the day, at the other times. She *sets* after the Sun and before he rises till the 9th, and again after the 24th, and during the day between the 10th and the 23rd. For the actual times every day, see opposite page.

She is on the Equator on the 14th and on the 28th. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Uranus on the 2nd; Jupiter, on the 11th; Mars, on the 21st; Mercury, on the 25th; Venus and Saturn, on the 28th; and Uranus, again on the 29th.

She is full on the 8th, and new on the 24th; but without an Eclipse at both times. Her times of change are given below.

On January 5th and 6th several stars are occulted by the Moon; the disappearances will take place at the dark limb of the Moon, and the re-appearances will take place at the bright limb, at the places shown in the annexed diagram, which is drawn for an inverting telescope.

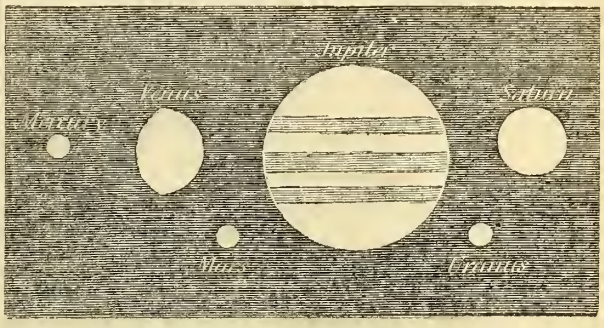
OCCULTATION OF STARS, JANUARY 5 AND 6, 1849.

	will disappear at the place marked	D. H. M.	and re-appear at the place marked	D. H. M.
48 Tauri	1 at 5	8 35 P.M.	2 at 5	9 11 P.M.
Gamma Tauri	3 at 5	10 39 „	„	4 at 5 11 27 „
Theta 1 Tauri	5 at 6	2 39 A.M.	„	8 at 6 3 31 A.M.
Theta 2 Tauri	6 at 6	2 47 „	„	V at 6 3 26 „
A star 5½ mag. in Taurus	7 at 6	3 29 „	„	9 at 6 4 16 „
85 Tauri	10 at 6	4 12 „	„	11 at 6 4 27 „

Mercury, from the 1st to the 13th, is in the constellation Sagittarius; between the 14th and 28th in that of Capricornus; and in Aquarius after the 28th.

He is an evening star from the 15th. He rises on the 1st, six minutes before the Sun; on the 3rd, at the same time as the Sun; and on the last day, 40m. after the Sun. He sets on the 12th at 1m., on the 20th at 34m., and on the last day at 1h. 24m. after the Sun sets; and, therefore, at the end of the month he is favourably situated for observation after sunset. He rises on the 1st at 6° S. of S.E. by E.; on the 18th, at S.E. by E.; and on the 30th, at E.S.E. He sets on the 1st at 6° S. of S.W. by W.; on the 18th, at S.W. by W.; and on the last day, at W.S.W. He is moving eastward among the stars throughout the month; is in superior conjunction with the Sun on the 8th; and is near the Moon on the 25th.

RELATIVE APPEARANCE OF THE PLANETS IN JANUARY, 1849.



Venus is in the constellation Capricornus from the 1st to the 3rd; in that of Aquarius, from the 4th to the 21st; and in that of Pisces, from the 22nd.

She is an evening star; and sets on the 1st at 7h. 28m. P.M., at 3°¾ S. of W.S.W.; on the 6th, at 7h. 43m. P.M., at the W.S.W.; on the 21st, at 8h. 28m. P.M., at the W. by S.; and on the 31st, at 8h. 57m. P.M., at 3°½ S. of W. She is moving eastward among the stars during the month; is near the Moon on the 28th, and Saturn on the 29th.

Mars is in the constellation Ophiuchus till the 16th; and in Sagittarius from the 17th.

He is a morning star, and is visible a short time before sunrise. He rises on the 1st at 6h. 23m. A.M., at 3°½ S. of S.E. by E.; and on the last day, at 6h. 6m. A.M., at 4°¾ S. of the same point of the horizon. His times of southing are given below; and he sets between 1h. and 2h. P.M. He is moving eastward among the stars; and is near the Moon on the 21st.

Jupiter is in the constellation Leo, and is visible throughout the night. He rises on the 1st at 7h. 30m. P.M., at 2° N. of E.N.E.; and on the last day, at 5h. 15m. P.M., at 3°½ N. of the same point of the horizon. He souths at an altitude of 53°¾ on the 1st, and of 54°¼ on the 31st; and he sets between 8h. A.M. and 10h. A.M.

He is moving slowly westward among the stars, and is near the Moon on the 11th.

Jupiter's Satellites.—The Immersions of the 1st, 2nd, and 3rd are visible, and disappear at the distance of one-fourth; less than one-half; and greater than one-half of his diameter from him respectively. On the 14th, at 8h. 50m., an Emersion of the 4th takes place, and it will re-appear at the distance of an eighth part of the diameter. These Eclipses will appear to take place on the right side of the planet through a telescope that does not invert, and on the left side as seen through one that does invert.

Saturn is in the constellation Pisces throughout the month.

He is an evening star, and sets near W. by S. on every day: on the 1st, at 10h. 15m. P.M.; on the 15th, at 9h. 26m. P.M.; and on the 31st, at 8h. 31m. P.M. He moves slowly eastward among the stars; and is near the Moon on the 28th, and Venus on the 29th.

Uranus is in the constellation Pisces throughout the year. He sets near the W. by N.: on the 1st at 1h. 2m. A.M.; and on the last day, at 11h. 7m. P.M. He souths on the 15th, at 5h. 29m. P.M., at an altitude of 45°. He moves eastward among the stars; and is near the Moon on the 2nd, and again on the 29th.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Afternoon	Mars. Morning.	Jupiter. Morning	Saturn. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 45	2 50	10 19	2 55	4 42
6	Aftern.	2 53	10 15	2 33	4 23
11	0 17	2 56	10 12	2 12	4 5
16	0 33	2 59	10 8	1 50	3 47
21	0 49	3 1	10 4	1 28	3 29
26	1 3	3 2	10 1	1 6	3 11
31	1 16	3 3	9 57	0 44	2 53

JUPITER'S SATELLITES.

Eclipses of 1st. Sat. Immersion.	Eclipses of 2nd Sat. Immersion.
D. H. M.	D. H. M.
1 11 5 P.M.	1 8 57 P.M.
7 6 30 A.M.	8 11 33 P.M.
9 0 59 A.M.	16 2 10 A.M.
16 2 52 A.M.	23 4 46 A.M.
17 9 21 P.M.	3rd. Sat.
23 4 46 A.M.	
24 11 14 P.M.	
30 6 39 A.M.	17 8 11 P.M.
	25 0 10 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
Xi¹ Ceti	5	3 5 46 P.M.	Dark
		3 6 38 P.M.	Bright
111 Tauri	6	6 11 48 P.M.	Dark
		7 0 37 A.M.	Bright
Tau Leonis	4	13 8 12 A.M.	Bright
		13 8 33 A.M.	Dark
38 Virginis	6	15 0 5 A.M.	Bright
		15 1 7 A.M.	Dark

For occultations on Jan. 5 and Jan. 6, see above.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.	
First Quarter ..	2	7	38	A.M.
Full Moon ..	8	10	50	P.M.
Last Quarter ..	16	6	54	A.M.
New Moon ..	24	10	3	A.M.
First Quarter ..	31	4	43	P.M.
Perigee	7	3	0	
Apogee	18 at Midnight			

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination South.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination South.	Uranus. Right Ascension	Uranus. Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	18h. 29m	24° 46′	21h. 34m	16° 22′	17h. 3m	23° 6′	9h. 37m	15° 10′	23h. 27m	5° 57′	1h. 9m	6° 38′
6	19 5	24 27	21 57	14 15	17 19	23 27	9 36	15 19	23 28	5 48	1 9	6 39
11	19 40	23 31	22 20	11 59	17 35	23 43	9 34	15 29	23 29	5 38	1 9	6 40
16	20 16	21 56	22 42	9 36	17 51	23 53	9 32	15 40	23 31	5 27	1 9	6 42
21	20 52	19 41	23 3	7 7	18 7	23 57	9 29	15 52	23 33	5 16	1 10	6 45
26	21 26	16 49	23 24	4 34	18 23	23 54	9 27	16 5	23 34	5 4	1 10	6 47

JANUARY.—PLOUGH MONDAY.

THE DESCRIPTIONS OF THE TWELVE MONTHS BY THOMAS MILLER.

He ploughs the hills and ploughs the dale,
He ploughs through field and fallow :
Who does not wish the Ploughman well,
Is but a sorry fellow.—*Old Ballad.*

Many of the old games, and masques, and mummings, which were in accordance with the simple habits of our homely forefathers, have long since passed away. A few only remain, out of those which it was their delight and amusement to witness; and even these are shorn of their ancient splendour; for, though still picturesque, they have a faded look, and seem no more in keeping with the manners and customs of the present day, than the murrey-coloured coats, and slashed doublets, and trunk hose would be, if dragged forth from the old oaken recesses in which they have lain, disturbed only by the moth for many a long year, and worn again by the present generation. Such as have survived the stern mandates of Cromwell, lived through the Restoration of Charles, and withstood all the stormy revolutions which at last settled down, when the House of Hanover was securely seated upon the throne, we shall occasionally glance at in our descriptions of the months; for they are still within the ancient boundary-line which every year is rapidly cutting up, and into the opening of which the steam-boats and railroads are entering, and overturning nearly all that is picturesque and primitive, that has for centuries given such life and beauty to the rural landscapes of England.

January, with its short days and long nights, though it still comes as of old, with frost, and snow, and cold, and darkness, brings with it once a year its merry Plough Monday, and in a few out-of-the-way country places the village street is all astir with the little crowd of gaping rustics, just as it was, except for the changes in costume and architecture, three or four centuries ago. The old fiddler, who dates every incident in his life from the many country wakes, feasts, and statutes he has attended, is again in requisition, although the snow lies deep upon the ground; the drum, which only sounds at the club-feast, or on such occasions as these, is again dragged from its hiding-place; and sometimes the old-fashioned pipe and tabor, which have been blown and beaten by the descendants of the same family, through many generations, are called in to awaken the sleeping echoes of winter. You hear the noisy group long before they heave into sight along the winding lane, engirded with its high and leafless hedges—green only where the ivy trails, or the prickly holly shoots up; they are announced by the loud huzzas which rend the air, and are followed by all the loiterers who have congregated from the villages for miles around.

Heralding the way, come the healthy-looking round chubby-faced country lads,

waving their hats and caps, regardless of the cold; their heavy boots crunching the snow at every step, and their hard naked hands nearly blue or purple through exposure to the frosty air. They are followed by pipe and tabor, fiddle and drum. Then appears a strong healthy-looking ploughman, with his heavy ankle boots, worsted stockings, stout corduroy breeches, and thick plush waistcoat, over which he wears a gown, borrowed for the occasion of Nanny or Molly, and the skirt of which he generally tucks up under his waistcoat until he enters the village, to keep it from draggling; and thus arrayed, with bonnet and cap on head, he comes dancing along, about as gracefully as a brown shaggy bear, and rattling the money-box, which he carries in his hand, at every step, for he is the Betsy, so famous in the olden time as the chief *figurante* on a Plough Monday. Next follows the plough, drawn by ten or a dozen stout countrymen, by ropes either thrown over their shoulders or fastened around their waists, while their hats or white smock-frocks are decorated with ribbons of almost all colours, amid which are placed bunches of ears of corn; he who guides the plough being ornamented like another Ceres, and, doubtless, like her, intended to represent the emblem of plenty. Next appear the threshers with their flails, and reapers with their hooks, waggoners with long whips dangling over their shoulders; bringing before the eye the whole procession of harvest, from the plougher, the sower, the reaper, the thresher, down to the dusty miller, who has covered himself with an extra coat of meal for the occasion, and has come to take toll out of the proceeds of the day.

While writing, the scene rises before the eye as distinctly as when in our boyish days, above twenty years ago, we stood a happy spectator, regardless of Winter—

> Cloathed all in freize.
> Chattering his teeth for cold, that did him chill;
> Whilst on his hoary beard his breath did freeze.—SPENSER.

We again see the big farm-house, with its ivy-covered porch, in which the jolly farmer, with his top-boots, blue coat, and pipe in mouth, stood beside his buxom and merry-faced wife, looking on with as much apparent pleasure as the little children, who rested with their hands on the topmost and frost-covered bar of the gate which they had climbed. What he dropped into "Betsy" the ploughman's box, fell with a heavy sound, causing the bonneted bearer to rattle it with extra force, and to cut a variety of most unlady-like capers. Then came the great brown jug, piled high with foaming mighty ale, which seemed quite a load even for the strong arms of the stout dairymaid who bore it; little Jack, the farmer's boy, followed with large drinking-horns, and a basket filled with such huge hunches of bread and cheese as showed that the worthy giver knew right well how to measure a ploughman's appetite. Then pipe and tabor, and drum and violin, were mute for several minutes, and all the sound heard, excepting an occasional huzza, was like that of a dozen horses crunching and feeding together. The jug was again refilled and emptied; and so they passed on from house to house until they at last came to one where a noted miser resided. They knocked at the door—there was no answer. "Betsy" rattled his box louder than ever, but no one came; drum, tabor, pipe, and violin thundered and screamed in vain; huzza after huzza was sent forth by the assembled crowd, but excepting a stealthy peep from behind the blind, and which would have cost the waiting-maid her place had she been discovered by the old curmudgeon, no other sign of life appeared within. "Gee-ho! Come-up!" exclaimed the man who held the stilts or handles of the plough, and in a moment the deep bright share was into the ground: backwards and forwards it went, cutting deeper, and the men pulling stronger at every furrow they made, until the whole lawn at the front of the miser's house lay brown, bare, and ridgy as a newly-ploughed field.

When the mischief was done the old miser made his appearance, and threatened the ploughmau with law, imprisonment, transportation; but no one seemed to advocate his cause. It was an old custom thus, to plough up the ground at the front of the doors of those who gave not "largess" on Plough Monday; nor do we remember a single instance of prosecution for the misdemeanour. Such abuses, however, we doubt not, have been instrumental in abolishing these old and useless customs. What we have here presented is a faithful portraiture of rural England only twenty years ago; and there are still, we believe, a few green quiet corners in our island, where Plough Monday is kept up in the present day. We have here preserved the outline of a faint and faded picture, the rich colouring of which began to decay from the very hour when Cromwell and his Roundheads shut up the ancient gallery of old English amusements. It was opened again at the restoration of Charles; but the damp and the mildew had settled down upon it. A new race of men had sprung up, and a mighty change, which is still advancing, began to show itself throughout the land—the merry England of our forefathers was growing into the working and thinking England in which we now live.

> The race of yore,
> Who danced our infancy upon their knee,
> And told our marvelling boyhood legends store,
> Of their strange ventures happ'd by land or sea;
> How are they blotted from the things that be!—SCOTT.

Few, unless they are well versed in geology, would dream of the appearance which our island presented in those early years that have passed away unnumbered by man, but which have left traces of their existence beneath the hills and vallies we daily tread. The landscape, which at this season of the year is leafless, and sometimes buried in its winding-sheet of snow, was thousands of years ago adorned with flowers, and fruits, and trees which now only blossom and ripen, and wave in the far-off sunny lands of the East. Then the huge hippopotamus wallowed in our rivers, and the mammoth and the mastodon shook those old (and ages ago buried) forests beneath their tread. In the excavations of railways, in the very heart of our ancient hills, and in the deep beds of our beautiful rivers, do we find the remains of these extinct monsters. The dam and its offspring sometimes buried side by side, a convincing proof that here the young was once bred, lived, and died. Amid the giant ferns of this early world, which have dwindled down to the knee-deep bracken through which we now tread, did the striped and sabre-toothed tiger couch, ages before his angry growl ever fell upon any human ear. Then the great-cave bear went prowling about our island; and herds of wolves and jackals pursued the maned and shaggy bison through the forest fastnesses. The huge elk, whose remains have been discovered, and the span of whose antlers from the tip of each horn was above thirteen feet, fed upon our hills, and stooped down to drink by the sides of our rivers, in those undated ages; for the shadow of man had not as yet been mirrored upon the face of those waters. Birds, whose gaudy plumage is now only to be seen in tropical forests, then plumed themselves in the sunshine on the boughs of such trees as never again threw their green shadows over that deep-buried and untrodden soil. Then our island was houseless, our seas masteless, nor had the print of any human foot as yet indented the sand upon our shore. Such a knowledge as this, wherever we may wander, never causes us to feel solitary; to vary a few lines hy Keats:

> though
> Keen fitful gusts are whispering here and there,
> Among the bushes, half bare and dry
> And stars look very cold about the sky,
> And we had many miles on foot to faire:
> Yet felt we little of the cold bleak air,
> Or of the dead leaves rustling drearily,
> Or of those silver lamps that burnt on high,
> Or of the distance from home's pleasant lair.

Wild, silent, and uninhabited have we found places which we have traversed in England during winter in our own day—the far-extending cliff country of Lincolnshire, backed by the high and villageless wold, that seemed in the distance to go climbing up until it was lost in the grey and leaden-coloured sky. On the huge table-lands which ascended, ledge above ledge, telling where for ages the locked-up waters had remained stationary, we have seen the snow lie white, deep, silent, and untrodden, just as it had been blown over the broad and shelterless vallies, and left there, height above height, like alp on alp. The flocks of sheep, that picked up a scanty subsistence in summer on those stony barriers of dried-up oceans, had been driven miles away by the herdsman into the lowlands; and thus all along the ridges of those high and silent wolds no living object, excepting some solitary bird, was seen to move. Neither hedge, nor shed, nor fence were there on that high and heaving ridge of wild hills, nor aught which bore sign or imprint of the hand of man. The few naked trees that hung leaning over the steep precipice-like ledges, looked as if they had been washed there ages ago, and left motionless one above the other by the sudden subsiding of those mighty waters. The gathering night, and the blinding snow-storm, with the howling wind blowing full in his face, would even now make the stout heart of a stranger quail, if, unacquainted with the country, he found himself there alone in the dusky close of a cold brief January day.

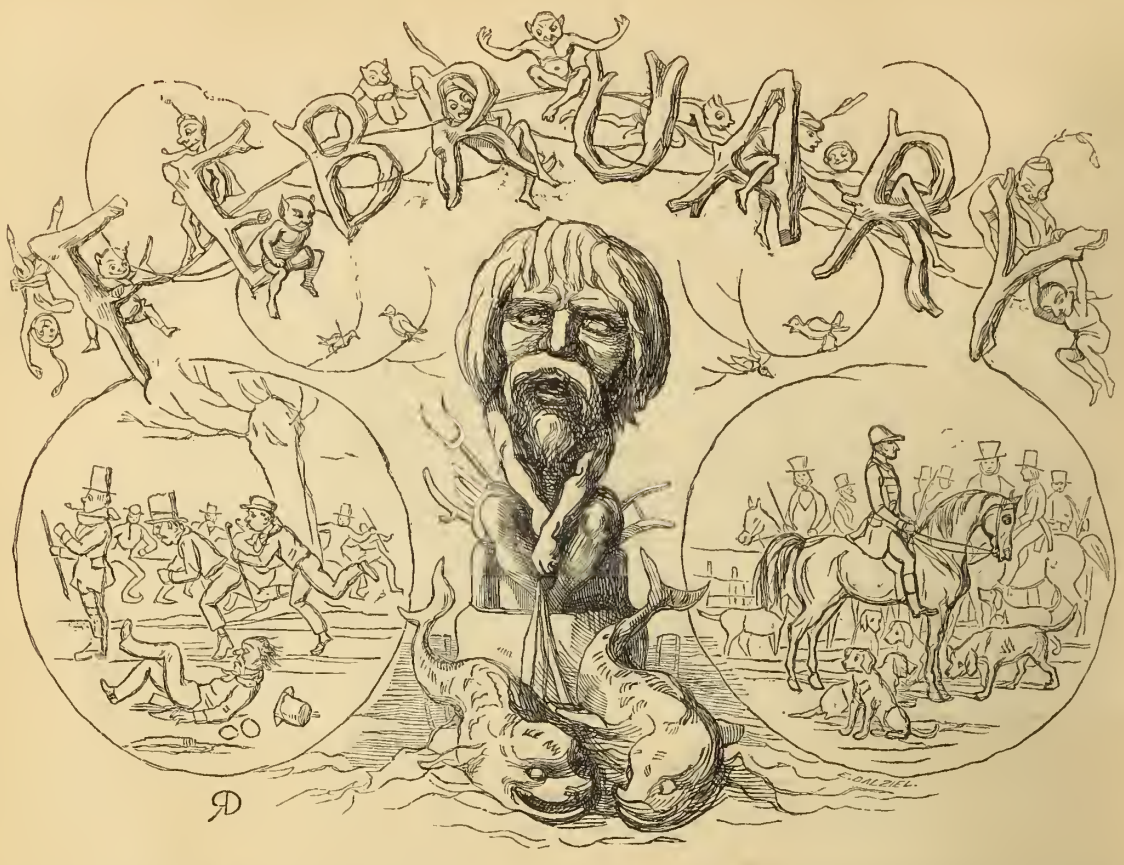
> Along the woods, along the moorish fens,
> Sighs the sad genius of the coming storm;
> And up among the loose disjointed cliffs,
> And fractured mountains wild, the brawling brook
> And cave presageful, send a hollow moan,
> Resounding long in list'ning fancy's ear.—THOMSON.

Descending from those heights, we came to the banks of old lonely rivers, whose waters were only ploughed by the keel of the fowler's boat, while he, stretched out at the bottom, glided in silence along, between the high armies of tall and tufted reeds, and sharp-edged water-flags, that glittered like scimitars through the hoar-frost; and tall naked rows of osiers whose stocks or roots were buried beneath the snow, until he arrived within shot of the whole flock of wild fowl, when, springing up on the sudden, like an apparition, hang went both his barrels in a moment, making a sudden plash upon the surface of the water, which the next minute was covered with the feathered bodies of the wounded and the slain. You saw the smoke rolling away like a silvery cloud above the heads of the tufted bulrushes—heard the echoes of his gun die along the hill-side—just caught the low lapping of the water as it was disturbed by the motion of his boat—then, saving the wind that whistled over the frozen sedge and blew bleakly through the naked willows, all again was still.

You wander along by the road-side spring, which is never frozen over, and see the little wagtail striding about, the very smallest of all our birds, which appears not to have its legs tied, which looks as if it scorned to go hopping along like many of the feathered race, but boldly lifts up one foot after the other, and struts, and looks around, as if it were marching at the head of a whole regiment of wagtails. True to the country in which he was bred, he disdains to number himself among the feathered gentry who hurry off, long before the approach of winter, to seek a warmer climate; but, like his companion the robin, he braves our severest seasons, and trusting to chance and his own industry, picks up his living as he best can, about spring-heads and water-courses, where a few insects are still to be found; and so between hunting for a living, sleeping, and amusing himself, he wiles away the dull winter, until spring throws her primrose-coloured garment over the sky.

The only sound, except the wind, that appears to give a voice to the wintry landscape, is the murmuring of the river: when that is frozen over and silent, it seems as if the pulse of nature had ceased to beat—as if the last stir of life was motionless—earthed as in a grave; that Hope had at last sunk down in very despair—she who had so long

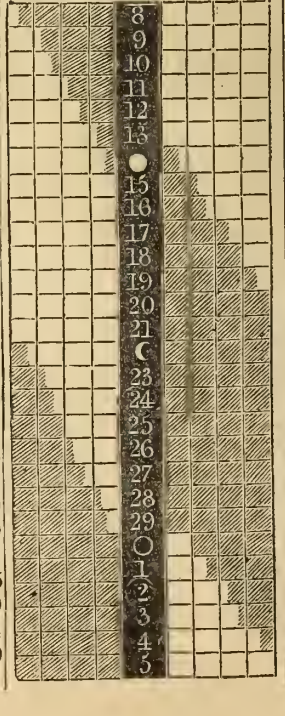
> Patient with bow'd head silent stood,
> And on her golden anchor leant,
> And watch'd below the sleeping flood,
> Where winter, 'mid the dreariment,
> Half-buried in the drifted snow,
> Lay sleeping on the frozen ground;
> Unheeding how the wind did blow,
> Bitter and bleak on all around.



M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Souths. Height above Horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon.	MOON. Souths. Height above Horizon	MOON. Sets. Morning.	Moon's Age.	High Water at London Bridge. Morning.	High Water at London Bridge. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	Th	Salmon Fishing begins	7 41	13 56	21½	4 47	11 31	6 57	52½	1 21		7 25	7 53	32
2	F	*Cand. Day*	7 40	14 3	21¾	4 49	Afternoon	7 54	55	2 33		8 25	9 5	33
3	S	*St. Blaize*	7 38	14 10	22	4 50	1 0	8 53	56¼	3 43		9 45	10 25	34
4	S	Septuages. S.	7 36	14 16	22½	4 52	1 57	9 52	56¼	4 48		11 10	11 45	35
5	M	*St. Agatha*	7 34	14 20	22¾	4 54	3 0	10 50	55	5 45		No Tide.	0 20	36
6	Tu	[Sir R. Peel born, 1788	7 32	14 24	23	4 56	4 11	11 47	52½	6 33		0 52	1 20	37
7	W	Capella souths 7h. 50m. P.M.	7 30	14 27	23¼	4 58	5 24	Morning.	49	7 13		1 48	2 10	38
8	Th	Half-Quarter	7 29	14 30	23½	5 0	6 37	0 40	45¼	7 45		2 35	3 0	39
9	F	Rigel souths 5h. 7m. P.M.	7 27	14 31	24	5 2	7 47	1 31	41	8 14		3 20	3 40	40
10	S	Q. Vic. mar. 1840	7 26	14 32	24¼	5 4	8 57	2 20	36¾	8 42		3 58	4 17	41
11	S	Sexagesima S.	7 24	14 32	24½	5 5	10 3	3 6	32¾	9 4		4 35	4 54	42
12	M	Beta Tauri souths 7h. 45m. P.M.	7 22	14 31	25	5 7	11 8	3 51	29	9 30		5 15	5 30	43
13	Tu	Castor souths 9h. 49m. P.M.	7 20	14 30	25¼	5 9	Morning.	4 35	25⅛	9 54		5 50	6 5	44
14	W	*St. Valentine.*	7 18	14 28	25½	5 11	0 11	5 20	22¾	10 21		6 23	6 40	45
15	Th	[*Old Cand. D.*	7 16	14 25	26	5 13	1 12	6 5	20¾	10 50		7 3	7 25	46
16	F	Pollux souths 9h. 49m. P.M.	7 14	14 21	26¼	5 14	2 10	6 51	19⅝	11 27		7 50	8 20	47
17	S	Alpha Orionis Souths at 7h. 57m. P.M.	7 12	14 17	26½	5 16	3 7	7 38	19	Afternoon		9 0	9 40	48
18	S	Quinquagesima	7 10	14 12	27	5 18	3 59	8 26	19½	0 53		10 20	10 55	49
19	M	[or Shrove S.	7 8	14 6	27¼	5 20	4 46	9 15	20¾	1 46		11 34	No Tide.	50
20	Tu	*Shrove Tuesday*	7 7	14 0	27¾	5 21	5 28	10 5	23	2 44		0 10	0 40	51
21	W	*Ash Wednesday*	7 5	13 53	28	5 23	6 7	10 55	26¼	3 50		1 0	1 24	52
22	Th	Great demonstra-	7 3	13 45	28½	5 25	6 40	11 45	—	4 59		1 45	2 5	53
23	F	tions, and barricades erected in Paris, 1848.	7 1	13 37	28¾	5 27	7 10	Afternoon	30	6 11		2 23	2 42	54
24	S	Revolution in Paris, 1848	6 59	13 28	29¼	5 29	7 37	1 25	34½	7 25		3 0	3 20	55
25	S	1st Sun. in Lent	6 56	13 18	29½	5 30	8 4	2 16	39	8 39		3 35	3 55	56
26	M	[*Quadragesima*	6 54	13 8	30	5 32	8 33	3 7	43½	9 54		4 10	4 32	57
27	Tu	Alpha Hydræ souths at 10h. 49m. P.M.	6 52	12 58	30¼	5 34	9 2	3 59	47¾	11 10		4 50	5 10	58
28	W	Regulus souths at 11h. 25m. P.M.	6 50	12 47	30½	5 36	9 35	4 54	51½	Morning.		5 30	5 52	59

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 2h. 4h. 6h. — After Sunset. O'Clock. 6h. 8h. 10h. — Moon's Age.



FEBRUARY.

The Sun is in the sign Aquarius till the 18th, on which day, at 5h. 16m. P.M., he enters the sign Pisces (the Fishes). On the 1st day he is 93,644,000 miles from the Earth. He *rises* on the 1st, at 5° S. of E.S.E.; on the 11th, at the E.S.E.; and on the 28th, at 1°¼ S. of E. by S. He *sets* on the same days, respectively, at 4°¾ S. of W.S.W., near the W.S.W., and at 1°¼ S. of W. by S. points of the horizon. His time of southing, in common clock time, and his height in degrees at the same time, are shown every day on the opposite page.

He is Eclipsed on the 23rd; which Eclipse is annular, and visible in the North Pacific Ocean, but not visible here.

The Moon, on the 1st, passes from Cetus to Taurus; is in Taurus on the 2nd and 3rd; in Gemini on the 4th and 5th; in Cancer on the 6th; in Leo on the 7th, 8th, and 9th; in Virgo from the 10th to the 13th; in Libra on the 13th and 14th; in Ophiuchus on the 15th, 16th, and 17th; on the 18th she is moving on the boundaries of Aquila and Sagittarius; and in the latter constellation on the 19th; in Capricornus on the 20th; in Aquarius on the 21st, 22nd, and 23rd; in Pisces on the 24th; in Cetus on the 25th; moving on the boundaries of Pisces and Cetus on the 26th; in Cetus again on the 27th; and on the 28th passes into Taurus.

She *rises* after sunset and before sunrise, from the 7th to the 22nd, and after sunrise on the remaining days. She *sets* before sunrise till the 7th, and after sunset from the 23rd, and during the day from the 8th to the 22nd. For the actual times, see the opposite page.

She is on the Equator on the 10th and again on the 26th. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Jupiter on the 7th; Mars, on the 19th; Mercury, on the 23rd; Saturn, on the 24th; Uranus and Venus, on the 26th.

She is full on the 7th, and new on the 23rd. On the latter day an Eclipse of the Sun takes place, but is invisible in Europe.

Mercury is in the constellation Aquarius throughout the month.

He is an evening star till the 25th, and a morning star from the 26th. He rises after the Sun till the 17th, at the same time as the Sun on the 18th, and 35m. before the Sun on the last day. He sets on the 1st at 1h. 28m.; on the 5th, at 1h. 42m.; on the 11th, at 1h. 45m.; on the 12th, at 1h. 42m.; on the 20th, at 51m., after the Sun sets; and on the 25th, at 4m.; and on the last day, at 40m. before the Sun sets. He is, therefore, favourably situated for observation after the Sun sets till the 20th. He sets 2° N. of W.S.W., on the 1st; on the 10th, at W. by S.; and on the 17th, at 7°¾ S. of W.; and on the 26th, at W. by S. He is moving eastward among the stars from the 1st to the 13th; is stationary on the 14th; and is moving westward from the 15th to the 28th. On the 8th he is at his greatest E. elongation; is near the Moon on the 23rd; and is in inferior conjunction with the Sun on the 24th.

Venus is in the constellation Pisces throughout the month.

She is an evening star; and sets on the 1st at 9h. 0m. P.M.; on the 15th, 9h. 37m. P.M.; and on the last day, at 10h. 8m. P.M.; at the W. on the 4th, and at the W. by N. on the 18th. She is moving eastward among the stars during the month; is near Uranus on the 23rd; and the Moon on the 26th.

Mars is in the constellation Sagittarius till the 24th, and in Capricornus from the 25th.

He is a morning star; and rises on the 1st at 6h. 4m. A.M., at 4°¾ S. of S.E. by E.; and on the last day, at 5h. 28m. A.M., at the S.E. by E. points of the horizon. His times of southing are given below; and he sets between 1h. and 2h. P.M. He is moving eastward among the stars, and is near the Moon on the 19th.

Jupiter is in the constellation Leo, and is visible throughout the night. He rises on the 1st at 5h. 10m. P.M., at 3°¾ N. of E.N.E.; and on the 28th, at 3h. 0m. P.M., at 4°¾ N. of E.N.E.; souths at an altitude of 54°¾ on the 1st, and of 56° nearly on the last day; and sets between 6h. A.M. and 8h. A.M. He is moving slowly westward among the stars, and is near the Moon on the 7th. On the 6th he is in opposition to the Sun.

Jupiter's Satellites.—The Immersions are visible till the 7th, and take place very near to the body of Jupiter, on the left hand as seen through a telescope that does not invert, and on the right hand of an inverting telescope. After the 7th the Emersions will become visible, and they will take place very near to the body of the planet, on the left hand as seen through a non-inverting telescope, and on the right hand as seen through an inverting telescope.

Saturn is in the constellation Pisces throughout the month.

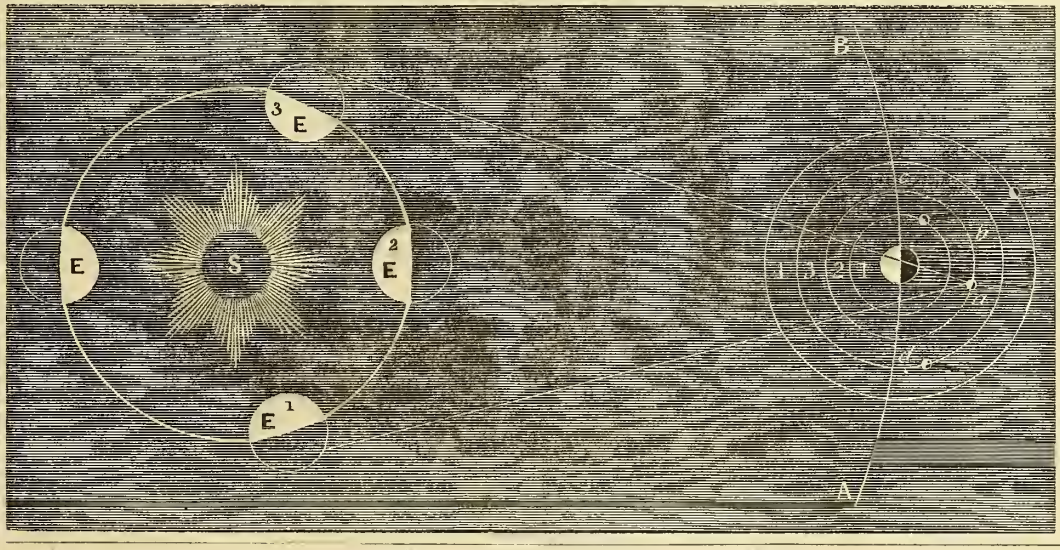
He is an evening star; and sets at 8h. 28m. P.M., on the 1st day, at 3°¾ N. of W. by S.; and on the last day at 7h. 1m. P.M., at 5°¾ N. of W. by S. He moves eastward among the stars and is near the Moon on the 24th.

Uranus sets near the W. by N. on the 1st, at 11h. 3m. P.M.; and on the last day at 9h. 21m. P.M. He souths on the 15th, at 3h. 30m. P.M., at an altitude of 45°. He moves eastward among the stars; is near Venus on the 23rd, and the Moon on the 26th.

ON THE SATELLITES OF JUPITER, AND THEIR ECLIPSES.

In the annexed diagram, S represents the Sun; and E, E 1, E 2, E 3, show the Earth in different parts of its orbit; J, Jupiter, in his orbit (A B), surrounded by his four satellites, the orbits of which are marked 1, 2, 3, 4. At *a*, the second satellite enters the shadow of the planet, and disappears; it emerges at *b*, but Jupiter conceals it at this time, as will be seen by drawing a line from E to *b*. The satellite then passes to its greatest eastern elongation (at *c*), and from thence, before the planet, to its greatest western elongation (at *d*). The same remarks apply to the other satellites. As the shadow of Jupiter is always directed *from* the Sun, it will be evident that the immersions only will be visible to a spectator on the Earth when the Earth is passing from E to E 2; and the emersions only will be visible whilst the Earth is passing from E 2 towards E, or when Jupiter is advancing from opposition to conjunction. The 3rd and 4th satellites, as has been remarked, in consequence of their greater distances from the planet, sometimes disappear, and re-appear on the same side of the disk.

DIAGRAM ILLUSTRATIVE OF THE ECLIPSES OF JUPITER'S SATELLITES.



TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN

Days of the Month.	Mercury. Afternoon	Venus. Afternoon	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.
1	1 18	3 3	9 56	0 40	2 50
6	1 23	3 3	9 53	0 17	2 32
11	1 19	3 3	9 49	Aftern.	2 14
16	1 0	3 3	9 46	11 28	1 57
21	0 28	3 3	9 42	11 6	1 39
26	Morning	3 2	9 39	10 44	1 22
28	11 34	3 1	9 37	10 36	1 15

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Immersion. I.			Eclipses of 2nd Sat. Emersion. E.		
D.	H. M.		D.	H. M.	
1	1 8 A.M.	I.	2	8 41 P.M.	I.
2	7 36 P.M.	I.	10	2 11 A.M.	E.
8	5 17 A.M.	E.	17	4 48 A.M.	E.
9	11 45 P.M.	E.	27	8 44 P.M.	E.
11	6 14 P.M.	E.			
17	1 39 A.M.	E.	3rd Sat.		
18	8 8 P.M.	E.	1	4 8 A.M.	I.
25	10 2 P.M.	E	22	7 36 P.M.	E.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		H. M.	
95 Virginis	6	Star below horizon.	
		12 11 18 P.M.	Dark
A star in Ophiuchus	5	16 4 29 A.M.	Bright
		16 5 49 A.M.	Dark
A star in Arietis	6	27 6 51 P.M.	Dark
		27 7 39 P.M.	Bright

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation

Full Moon	7D.	11H.	16M	A.M.
Last Quarter.. ..	15	4	3	A.M.
New Moon	23	1	30	A.M.
Perigee	3	9		P.M.
Apogee	15	7		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination South.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination South.	Uranus. Right Ascension	Uranus. Declination North.
	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′
1	22h. 4m	12° 45′	23h. 49m	1° 28′	18h. 43m	23° 43′	9h. 24m	16° 20′	23h. 37m	4° 49′	1h. 11m	6° 51′
6	22 29	9 14	0 9	North.	18 59	23 27	9 21	16 33	23 38	4 36	1 11	6 55
11	22 45	6 18	0 29	3 43	19 15	23 5	9 19	16 45	23 40	4 22	1 12	6 59
16	22 46	4 47	0 49	6 16	19 31	22 36	9 16	16 58	23 43	4 8	1 13	7 4
21	22 33	5 12	1 8	8 44	19 47	22 2	9 14	17 9	23 45	3 54	1 13	7 9
26	22 14	7 7	1 27	11 8	20 3	21 22	9 11	17 20	23 47	3 40	1 14	7 14

FEBRUARY.=VALENTINE DAY.

'Twas on the morn of Valentine, when birds begin to prate,
Dame Durdon's servant-maids and men, did each betake a mate.
There was Moll and Bet, and Doll and Tet, and Dorothy draggle tail,
And Kate who was a charming girl to carry the milking-pail.

Old Song, entitled "Dame Durdon.

FEBRUARY brings with it Valentine Day. It is the month of billing and cooing when youthful lovers have a most mysterious affection for hearts and darts, wings and rings, Cupids and altars, and no end of nameless emblems surrounded with lace-edged paper, and borders of flowers in all kinds of unnatural colours, which hang temptingly in the windows, and greatly bewilder the senses of both youth and maiden, while they gaze. What a fluttering there is amongst young hearts, what a trembling bashfulness do the fairer purchasers display if the vendor of these cherished love-tokens chances to be a handsome young shopman, assuring him, should he request permission to write the address, that they have only purchased it to please a young friend, and that on no account should they themselves think of sending such nonsensical trifles. "Oh, dear, no! on no account." But St. Valentine's is a day of little harmless deceits; it seems to have been dedicated to disguised handwritings and false signatures; when letters that are only sent to the next door are posted a mile or two away, yet, strange ending of all, each fond lover hopes to be detected through this thin disguise. What a knowing and important look does the postman assume on the morning of Valentine Day, especially in the country, where almost every rustic maiden is known to him personally, and where he is as confident as if he had opened and read the missive, that it is not the only messenger of love that has been sent, but he can give a shrewd guess as to whence and from whom the little packet has been despatched. The country barmaid seems rather more demure on such a morning; and even hard-handed and red-armed Betty looks brighter about the eyes than the tin and copper utensils which she daily scours—coming to the door ever and anon—peeping down the road, and wondering whatever it is that makes John, the postman, so late. Then the ostler has a struggle with Betty in the kitchen, endeavouring to get a peep at her Valentine; while the postboy looks with eyes askance upon Jane, the barmaid, on whom he is, as they say in the country, "rather sweet." He finds more to do than usual in the stable amongst his horses, whistles a great deal to himself, and when asked by the pretty flirt what is the matter, answers "Oh, nothing at all!" wondering all the while to himself who can have had the impudence to write to Jane, and only wishing that he knew. She, perhaps, to make him a little jealous, has bought and posted the Valentine, and addressed it to herself, for such manœuvres are occasionally practised by the maidens when they wish to bring a distant lover to the point at

issue. Another picture which we have seen of Valentine Day would have looked well in the minute painting of a Wilkie. The fond old mother, with her spectacles on, reading the Valentine to her husband, who smiled as he listened attentively to every line, which said

> The rose is red, the violet's blue,
> Carnation's sweet, and so *is* you.
>
> The ring is round and has no end,
> So is my love to Mary, my friend.
>
> First we cast lots, and then we drew,
> Kind fortune said it must be you.

While the pretty daughter to whom these old-fashioned lines were directed sat with her hands clasped together on her knees, looking thoughtfully in the fire and wondering to herself whether or not William really meant what he had written, and if he loved her truly, as much as he pretended to do. Then when she had retired to rest, the old people would sit down and think over what they could spare Mary towards housekeeping, when she married, and they would enumerate nearly everything they possessed, and deprive themselves of many little necessary articles, to add to the comforts of Mary, for ten to one they knew William's mind much better than she did: as the lover and the intended father-in-law, had often met on a Saturday evening at the Plough, where, over a pint and a pipe, they had discussed the whole affair, even down to what they should provide for dinner on the wedding-day.

Many antiquarians have endeavoured in vain to unravel the origin and mystery of Valentine Day, but their labours have hitherto been in vain; if discovered, it would likely enough be as unmeaning as the source from whence so many of our old customs have sprung, and not worth the labour wasted. Our ancestors were pretty close observers of nature, and there is but little doubt that, as they noticed the birds, which first begin to build and pair at this period, when the weather is favourable, so natural an occurrence might lead to youths and maidens imitating the custom by selecting lovers, glad of any amusement after the dark mid-winter had passed, and that Valentine Day had no other origin. As far back as we have been enabled to trace this love-making day, we find it linked with the mating of birds, which seems inseparable from St. Valentine; and we are at a loss to imagine how the worthy bishop, whose name is associated with it, first fell into such company.

The earliest Valentines were nothing more than slips of paper, on which the names of both sexes were written: they were placed apart, the men drawing from the pile on which the women's names were endorsed, and they again taking the first they touched from the opposite heap. These names were worn for a number of days—sometimes inside the coat, waistcoat, or bodice—sometimes only on the sleeve, just as the feigned or real lover intended to express his passion; and there is no doubt but that such a game, begun in jest, ended at times in earnest, and that by this means many of our forefathers won their fair brides.

Even in our own day (and in the country the harmless superstition still exists), the first maiden we met on this auspicious morning was considered our Valentine, and as such was hailed; and no little trouble do the rustic lovers put themselves to occasionally, to meet the one on whom their choice has before been fixed. We can remember ourselves in the hey-day of youth being foolish enough to walk two miles in the snow and darkness, and waiting until the cottage-door opened, to claim a cherry-cheeked farmer's daughter for our Valentine. Too poor, perhaps, to purchase the printed epistle, with Cupid's altar, hearts, and doves, we presented the original, and thereby saved both paper and postage. Gay, in his "Shepherd's Week," thus describes this old superstition:—

> Last Valentine, the day when birds of kind
> Their paramours with mutual chirpings find,
> I early rose, just at the break of day,
> Before the sun had chased the stars away.
> A-field I went, amid the morning dew,
> To milk my kine (for so should housewives do)
> Thee first I spied: and the first swain we see,
> In spite of fortune, shall our true-love be.

We have in our possession, framed and glazed, a Valentine, which was sent to a dear old lady we well know, more than half a century ago. It must have taken many hours to have cut out the hearts and diamonds in scissor-work, and painted the border which surrounds the unsailor-like looking gentleman, who is standing under a tree, and pointing to his ship. Both Chaucer and Lydgate make mention of Valentine Day, for the "Morning Star of Poetry" says—

> Blessed be Saint Valentine,
> For on his day I chose you to be mine—
> Without repenting, my heart sweet.

—proof that five hundred years ago it was celebrated in England.

Towards the close of the month, if the weather is fine, the gardeners begin to bestir themselves. You see the little children out beside the cottages, with their tiny spades, assisting to clear away the withered boughs, and delighted at the fire that is kindled to burn up the rubbish, into which they thrust almost everything they can lay hold of that will burn. Days are longer, and they remain out to the very last minute, it is light, to play in the village street. Such a picture have we now before us. The scene is a rough-hewn wall dividing a church-yard from the high-road: on the opposite ascent stand a row of little cottages, which overlook the low stony barrier, and command a view of the resting-places of the dead. A plot of grass, that already wears a green spring look, slopes down to the edge of the high-road; beside which a clear water-course goes tinkling into the distant valley, then empties itself into a deep sluice, which goes murmuring along through the dark flood-gates that open into a neighbouring river. The stream is crossed by a strong plank, which leads to the cottages. Some of the children are throwing stones and bits of sticks into the stream; others are watching them float away, and anxious that this boat, as they call it, should beat the other. Cold as it still is, a little boy and girl are sitting on the sloping greensward: their mother, who stands sewing at the cottage-door, has twice warned them that they will take cold unless they get up; but they pay no regard to her. Two others are sitting astride the low church-wall; a third is jerking stones into the brook. Lower down another group are running after each other. Beyond these you see the light from the blacksmith's shop falling faintly across the road. Most of the cottage doors are open, for, although only as yet February, the air is as mild as if it were April. An artist might sketch such a scene for a summer evening, were it not that the trees are still leafless; for the little green on the elders beside the brook, and the tiny buds on the gooseberry-bushes, are as yet the only heralds that proclaim the coming of Spring.

> The cloudy brow
> Of winter smooth'd, up from her orient couch
> She springs, and like a maid betroth'd, puts on
> Her bridal suit, and with an ardent smile
> Comes forth to greet her lover. Graceful 'tis,
> Ay, passing sweet, to mark the cautious pace
> Of slow-returning spring, e'en from the time
> When first the matted apricot unfolds
> Its tender bloom, till the full orchard glows.—HURDIS.

In our description of February last year we only made slight mention of the rooks. We will now endeavour to do more justice to the habits of these dusky gentlemen, who go marching over field and furrow as if they were alone the sole proprietors of the land. Like many other social communities, they are made up of good and bad, and, in spite of a tolerably vigilant police, are not free from the depredations of their own light-fingered gentry, who do not hesitate to carry away the whole of a neighbour's house when his back is turned; or sometimes instead of removing it, they take possession, and although generally turned out in the end, they have been seen to maintain their ground with a spirit worthy of a better cause. Sometimes a young married couple having laid a good solid foundation for their future home, return with a couple of rafters in their beaks, which, after a careful survey, they have borne over hill and valley, with weary wings, an immense distance; when, lo! instead of finding the half-finished house as they left it, the very foundation is gone, and nothing but the naked fork of the branch on which it was laid remains. Well may they bob their heads and caw to one another, and wonder what impudent thieves have been so busy during their absence. They set out on the search, and find on the next tree every stick and stake twisted into another nest, on which one of the plunderers is resting, while the other robber, a down-looking dark-faced rascal, is perched on the branch beside his companion. After exchanging a word or two of a sort on each side, the battle commences: the whole neighbourhood is alarmed; the police interfere; and being beaten the culprits are driven out—transported to some solitary tree—and not allowed during that season to return to the rookery.

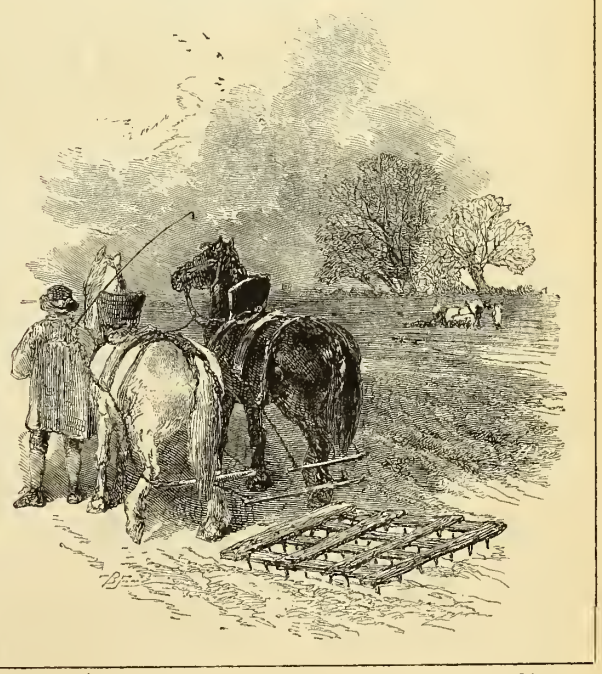
Your rooks are not a proud people, who refuse to mingle with strangers, for they will frequently allow the noisy jackdaws to build beside them, and are not above dining with the starlings in winter, so long as they conduct themselves respectfully. Every one who has rambled out in spring or summer must have noticed the hundreds of small caterpillars which are often seen suspended by their own threads from the trees, especially the oak, the beautiful foliage of which they soon destroy. Here the rooks find a rich repast; and instead of waiting until the insects have spun their way to the ground, these birds alight upon the trees, and, fluttering their great black wings, send down the caterpillars in thousands, and having strewn the greensward with a plentiful banquet, the rooks then descend and eat their fill.

Although the hooded crows do not live and build together in common like the rooks, but in pairs, and generally at some distance, yet they hold what naturalists have called a Crow-Court. For two or three days may they be seen assembling together on some particular hill or field; and Dr. Edmonson, in his work on the "Shetland Islands," describes them as delaying the trial for a day or two, until sufficient numbers have arrived to form the court. Whether the prisoners are driven thither by force, or come to defend themselves, are found guilty by witnesses, or what, cannot be known, though it is an undisputed fact, that the whole assembly are heard to croak as if in argument; that this lasts for some time—when the court rises like one *crow*, and begins to peck and beat the prisoners to death. Sometimes three or four of these victims are left dead on the floor of the court; and when the execution is over, the whole tribe disperse, betaking themselves in couples to their solitary trees, nor ever assembling together again in numbers until the next great crow-court is summoned.

The swallow and the martin, if the weather is very favourable, often arrive by the end of this month, and we hear the old familiar twittering under the eaves in the early morning.

"The nest of a bird," says Mr. Crouch, "is so interesting an object, so curiously and admirably contrived for an evident purpose, of materials apparently so little calculated for the formation of such a structure, and its form and position are so varied according to the aptitude for comfort of its inhabitants, combined with security from discovery and danger, that it has ever been contemplated as a surprising manifestation of skill and intelligence in the little beings engaged in its fabrication."

> Some to the bolly hedge
> Nestling repair, and to the thicket some:
> Some to the rude protection of the thorn
> Commit their feeble offspring.—THOMSON.



M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon.	MOON. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 5h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 7h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. s.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Th	*Ember Week*	6 48	12 35	31	5 38	10 12	5 49	54¼	0 24		6		6 15	6 35	60
2	F	*St. Chad*	6 46	12 23	31½	5 39	10 57	6 46	56	1 34		7		7 2	7 30	61
3	S	Capella souths 6h. 19m. P.M.	6 44	12 10	31¾	5 41	11 49	7 44	56¼	2 39		8		8 4	8 40	62
4	S	2ND S. in LENT	6 42	11 56	32¼	5 43	Afternoon	8 41	55½	3 38		9		9 25	10 10	63
5	M	Sirius souths 7h. 45m. P.M.	6 40	11 43	32½	5 44	1 55	9 37	53½	4 28		10		10 53	11 40	64
6	Tu	Castor souths 8h. 28m. P.M.	6 38	11 29	33	5 46	3 5	10 30	50½	5 10		11		No Tide.	0 15	65
7	W	*Perpetua*	6 36	11 14	33¼	5 48	4 16	11 21	47	5 44		12		0 44	1 10	66
8	Th	Eclipse of Moon	6 33	10 59	33¾	5 50	5 28	Morning	43	6 14		13		1 37	2 0	67
9	F	Procyon souths 8h. 22m. P.M.	6 31	10 44	34	5 51	6 36	0 10	38¾	6 41		●		2 20	2 40	68
10	S	Pollux souths 8h. 23m. P.M.	6 28	10 28	34½	5 53	7 45	0 57	34½	7 6		15		3 0	3 20	69
11	S	3RD S. in LENT	6 26	10 12	35	5 55	8 52	1 43	30½	7 32		16		3 35	3 53	70
12	M	*St. Gregory*	6 24	9 55	35¼	5 57	9 56	2 28	27	7 58		17		4 10	4 25	71
13	Tu	Regulus souths 10h. 34m. P.M. [1757	6 21	9 39	35¾	5 59	10 59	3 13	24	8 22		18		4 45	5 0	72
14	W	Adm. Byng shot,	6 18	9 22	36	6 0	At Midnight	3 58	21½	8 51		19		5 15	5 35	73
15	Th	Castor souths 7h. 52m. P.M.	6 16	9 5	36¼	6 2	Morning.	4 44	19¾	9 23		20		5 50	6 7	74
16	F	Procyon souths 7h. 54m. P.M.	6 13	8 47	36¾	6 4	0 56	5 30	19	10 1		21		6 25	6 45	75
17	S	*St. Patrick*	6 11	8 30	37¼	6 6	1 50	6 18	19	10 45		☾		7 5	7 30	76
18	S	4TH S. in LENT	6 9	8 12	37¾	6 8	2 39	7 6	20	11 34		23		8 0	8 45	77
19	M	[Edward King of West Sax.	6 7	7 54	38	6 9	3 23	7 55	22	Afternoon		24		9 24	10 5	78
20	Tu	Spring Qr. begins	6 5	7 36	38½	6 11	4 2	8 44	24¾	1 31		25		10 45	11 25	79
21	W	*Benedict*	6 3	7 18	38¾	6 12	4 37	9 34	28¼	2 38		26		No Tide.	At Noon.	80
22	Th	Pollux souths 7h. 37m. P.M.	6 1	7 0	39	6 14	5 8	10 24	32½	3 49		27		0 30	0 55	81
23	F	Weber died, 1829	5 59	6 42	39½	6 15	5 37	11 14	—	5 3		28		1 15	1 35	82
24	S	[*Ann. Lady Day*	5 57	6 23	40	6 17	6 5	Afternoon	37	6 18		○		1 55	2 15	83
25	S	5TH S. in LENT,	5 54	6 5	40½	6 18	6 33	0 58	41¾	7 36		1		2 33	2 50	84
26	M	Pr. Geo. Wm. brn.	5 52	5 47	40¾	6 20	7 2	1 51	46¼	8 54		2		3 10	3 30	85
27	Tu	[1819	5 50	5 28	41¼	6 22	7 34	2 47	50¼	10 11		3		3 49	4 10	86
28	W	Abercromby died,	5 47	5 10	41½	6 24	8 11	3 43	53½	11 25		4		4 30	4 50	87
29	Th	[1801	5 45	4 51	42	6 26	8 54	4 41	55½	Morning.		5		5 13	5 35	88
30	F	Camb. Term ends	5 43	4 33	42¼	6 28	9 45	5 39	56¼	0 34		6		5 57	6 20	89
31	S	Ox. Term ends	5 41	4 14	42¾	6 30	10 43	6 37	56	1 34		☽		6 50	7 20	90

MARCH.

The Sun is in the sign Pisces till the 20th, on which day, at 5h. 13m. P.M., he enters the sign Aries (the Ram), and Spring commences. On the 1st day he is 94,195,000 miles from the Earth. He *rises* on the 1st at $\frac{3}{4}$° S. of E. by S.; on the 20th, at the E.; and on the 31st, at 6°$\frac{1}{2}$ N. of E. He *sets* on the same days respectively, at $\frac{3}{4}$° S. of W. by S., at the W., and at 7° N. of W. His time of southing, in common clock time, and his height in degrees at the same time, are shown every day on the opposite page.

The Moon is in the constellation Taurus on the 1st and 2nd; on the 3rd, in Orion, and crossing the Milky Way; in Gemini on the 4th; in Cancer on the 5th and 6th; in Leo on the 7th and 8th; in Virgo from the 9th to the 12th; in Libra on the 13th and 14th; in Ophiuchus on the 15th and 16th; near Aquila and Sagittarius on the 17th and 18th; in Sagittarius on the 19th; in Capricornus on the 20th; in Aquarius on the 21st and 22nd; in Pisces on the 23rd; near both Pisces and Cetus on the 24th and 25th; in Cetus on the 26th; near Cetus and Aries on the 27th; in Taurus on the 28th, 29th, and 30th; and in Gemini on the 31st.

She *rises* before the Sun sets till the 8th, after sunset till the 23rd, and after sunrise from the 24th. She *sets* before sunrise till the 8th, during the day till the 24th, and after sunset from the 25th. For the actual times, see the opposite page.

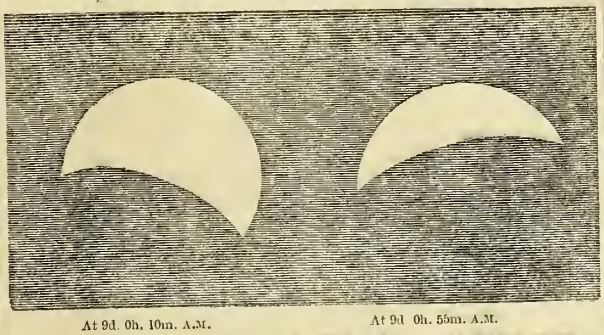
She is on the Equator on the 10th and on the 24th. Her time of southing, in common clock time, and her height in degrees at the same time, are given, for every day, on the opposite page.

She is near Jupiter on the 6th; Mars on the 21st; Mercury on the 22nd; Saturn on the 24th; Uranus on the 25th; and Venus on the 27th.

She is full on the 9th, and new on the 24th; and an Eclipse of the Moon takes place at the former time.

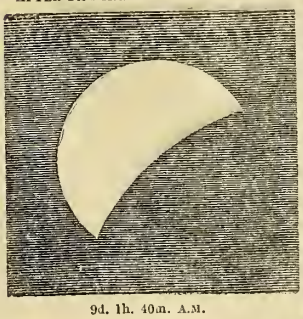
The Eclipse of the Moon begins at London, on the 8th, at 11h. 25m. P.M.; and its successive appearances are shewn in the accompanying diagram.

APPEARANCE OF THE MOON DURING HER ECLIPSE.



At 9d. 0h. 10m. A.M. At 9d 0h. 55m. A.M.

AFTER THE MIDDLE OF THE ECLIPSE.



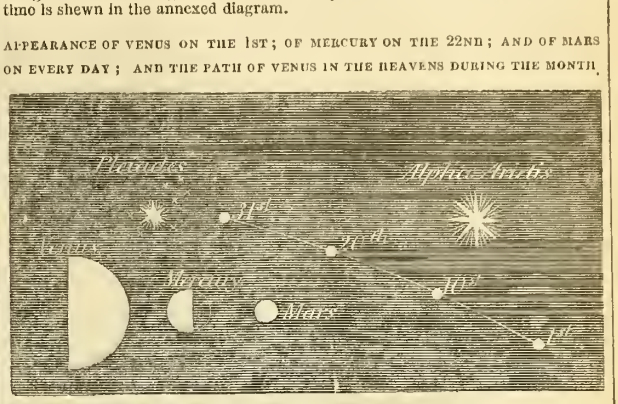
9d. 1h. 40m. A.M.

The middle of the Eclipse occurs on the 9th, at 0h. 55m. A.M.; and the annexed diagram shows the appearance of the Moon after this time, which ends at 2h. 25m. A.M. This is the only visible Eclipse during the year.

Mercury is in the constellation Aquarius till the 30th; and on the 31st he passes into that of Pisces.

He is a morning star; and rises, on the 1st, at 41m.; on the 7th, 8th, and 9th, at 50m.; on the 10th, at 49m.; and on the last day, at 32m., before the Sun. He is not very favourably situated for observation. He sets before the Sun throughout the month. He rises, on the 1st, at 2°$\frac{1}{2}$ E. by S; on the 15th, at 8° S. of E. by S.; and on the 31st, at 2° S. of E. by S. He is moving westward among the stars from the 1st to the 7th; is stationary on the 8th; and is moving eastward from the 9th to the 31st. He is near the Moon on the 22nd, and at his greatest west elongation on the same day. His telescopic appearance at this time is shewn in the annexed diagram.

APPEARANCE OF VENUS ON THE 1ST; OF MERCURY ON THE 22ND; AND OF MARS ON EVERY DAY; AND THE PATH OF VENUS IN THE HEAVENS DURING THE MONTH.



The planets are drawn on a scale of 40 seconds of arc to one inch; and the path of Venus with respect to the fixed stars is on a scale of 15 degrees to one inch.

Venus is in the constellation of Aries till the 30th; and in that of Taurus on the 31st.

She is an evening star; and sets, on the 1st, at 10h. 10m. P.M.; on the 6th, at 10h. 21m.; on the 12th, at 10h. 33m.; on the 18th, at 10h. 44m.; on the 24th, at 10h. 51m. P.M.; and on the 31st, at 10h. 56m. P.M.; at 8°$\frac{3}{4}$ N. of W. by N. on the 1st; at W.N.W. on the 4th; and at N.W. by N. on the 23rd. She is moving eastward among the stars during the month; is at her greatest east elongation on the 1st; is in perihelion on the 10th; and near the Moon on the 27th. Her appearance on the 1st, and her path in the heavens, are shewn in the annexed diagram.

Mars is in the constellation Capricornus throughout the month.

He is a morning star; and rises, on the 1st, at 5h. 27m. A.M., at the S.E. by E.; and on the last day, at 4h. 25m. A.M., at 1°$\frac{1}{4}$ S. of the E.S.E. point of the horizon. His times of southing are given below; and he sets between 1h. and 2h. P.M. He is moving eastward among the stars, and is near the Moon on the 21st.

Jupiter is in the constellation Cancer throughout the month.

He is visible throughout the night. He rises, on the 1st, at 2h. 55m. P.M.; and on the last day, at 0h. 45m. P.M.; souths at an altitude of 56° nearly on the 1st, and of 56°$\frac{1}{2}$ at the end of the month, this altitude being the greatest he attains during the year. He sets between 4h. and 6h. A.M. He is moving slowly westward amongthe stars till the 27th, after which time he is nearly stationary among them, and is near the Moon on the 6th.

Jupiter's Satellites.—The Emersions of the 1st, 2nd, and 3rd are visible; those of the 1st re-appear at less than one-half; those of the 2nd, at greater than one-half; and those of the 3rd, at one diameter of the Planet nearly. On the 5th, both an Immersion and an Emersion of the 4th are visible; it immerges at the distance of one diameter, and emerges at the distance of two diameters. All these phenomena take place to the left as seen through a non-inverting telescope, and to the right of the Planet as seen through an inverting telescope.

Saturn is in the constellation Pisces till the 9th; and in that of Cetus from the 10th till the end of the year.

He is an evening star at the beginning of the month; and sets, on the 1st day, at 6h. 57m. P.M. Towards the end of the month, he rises, souths, and sets at the same times as the Sun; and is not favourably situated for observation. He moves eastward among the stars, is in conjunction with the Sun on the 18th, and is near the Moon on the 24th.

Uranus sets near the W. by N., on the 1st, at 9h. 18m. P.M.; and on the last day, at 7h. 30m. P.M. He souths before the Sun sets; and is, therefore, not visible at these times. He moves slowly eastward among the stars, and is near the Moon on the 25th.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning	Venus. Afternoon	Mars. Morning.	Jupiter. Afternoon	Saturn. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 27	3 1	9 36	10 31	1 11
6	10 58	3 0	9 32	10 10	0 54
11	10 40	2 58	9 28	9 48	0 37
16	10 30	2 55	9 24	9 27	0 19
21	10 26	2 51	9 20	9 6	At noon.
26	10 27	2 47	9 15	8 45	Morn.
31	10 31	2 41	9 11	8 25	11 27

JUPITER'S SATELLITES.

Eclipses of		
	1st Sat.	2nd. Sat.
	Emersion.	Emersion.
	D. H. M.	D. H. M.
	4 11 56 P.M.	6 11 21 P.M.
	12 1 51 A.M.	14 1 58 A.M.
	13 8 19 A.M.	31 8 29 P.M.
	19 3 45 A.M.	3rd Sat.
	20 10 14 P.M.	
	28 0 9 A.M.	1 11 35 P.M.
		9 3 34 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
26 Geminorum	5½	3 9 16 P.M.	Dark
		3 10 22 P.M.	Bright
13 Virginis	6	10 2 37 A.M.	Bright
		10 3 45 A.M.	Dark
k Virginis	6	10 9 29 P.M.	Bright
		10 10 11 P.M.	Dark
111 Tauri	6	29 7 30 P.M.	Dark
		29 8 35 P.M.	Bright
117 Tauri	6	29 9 23 P.M.	Dark
		29 10 3 P.M.	Bright

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.	
First Quarter ..	2	0	3	A.M.
Full Moon ..	9	1	2	A.M.
Last Quarter ..	17	0	39	A.M.
New Moon ..	24	2	6	P.M.
First Quarter ..	31	6	58	A.M.
Perigee	1	5	0	A.M.
Apogee	15	4	0	P.M.
Perigee	27	11	0	A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination South	VENUS. Right Ascension	VENUS. Declination North.	MARS. Right Ascension	MARS. Declination South.	JUPITER. Right Ascension	JUPITER. Declination North.	SATURN. Right Ascension	SATURN. Declination South	URANUS. Right Ascension	URANUS. Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	22h. 4m	8° 31′	1h. 38m	12° 32′	20h. 13m	20° 55′	9h. 10m	17° 25′	23h. 48m	3° 31′	1h. 15m	7° 17′
6	21 54	10 30	1 56	14 44	20 29	20 6	9 8	17 34	23 50	3 16	1 16	7 23
11	21 55	11 39	2 14	16 49	20 44	19 12	9 6	17 42	23 53	3 2	1 17	7 28
16	22 5	11 54	2 31	18 44	21 0	18 13	9 4	17 49	23 55	2 47	1 18	7 34
21	22 22	11 21	2 47	20 28	21 15	17 9	9 3	17 54	23 57	2 32	1 19	7 41
26	22 42	10 5	3 2	22 0	21 30	16 1	9 2	17 58	0 0	2 17	1 20	7 47

MARCH.—PRIMROSE AND PALM GATHERING.

O Spring! dear Spring! thou more dost bring
Than birds, or bees, or flowers—
The good old time, the holy prime
Of Easter's solemn hours;
Prayers offer'd up, and anthems sung,
Beneath the grey church towers.—*Feasts and Festivals.*

PALM-SUNDAY, was an old holiday which our ancestors kept with great reverence, in remembrance of Our Saviour's entrance into Jerusalem; and it is still a custom to ornament the houses in the country with the silvery buds of the willow (which are called palm) in the present day. These buds, which lie like great oval pearls upon the slender stems of the osiers, are the earliest heralds of spring, and often come out long before the hawthorn has put forth a single speck of green, and may frequently be seen in the cottage windows overtopping a border of sweet primroses, snowdrops, or violets, which have blown before the coming of Easter. Many a mild March day has seen us out with our youthful companions in the fields beside the river Trent, gathering the buds of the willow and the white blossoms of the blackthorn, which also hang upon the hedges, like a cloud of flowers, long before a green leaf, excepting that of the alder, has shot out of its wintery sheath. Although it was not the palm of Palestine we gathered, yet it was such as our forefathers had for centuries chosen as the emblem of those green branches which were scattered before Our Redeemer; and to us it brought back an old and holy pictnre, carrying the imagination into that ancient city of the East, and bringing before the "mind's eye" one of those impressive scenes which are linked with the establishment of the Christian religion. It also calls up the figures of those pious pilgrims who wandered into the Holy Land and visited many a distant shrine, bearing the palm-branch in their hands—the acknowledged token of peace and prayer.

The abolition of these sacred emblems, which once adorned our churches, and were borne in our Easter processions, could be of no benefit to the progress of religion. They were the productions of Nature, not the work of man: they served to show that He who ruleth the seasons had again sent Spring with all her flowers; and with these were linked the memory of the Son of God, who rode not forth in regal purple, crowned with gold, but "meek, and sitting upon an ass." Such associations did the silver buds bring to the early Christians, and the custom of palm-gathering was kept up until the Reformation in England.

With what delight did we hail the first appearance of these pearl-like buds—

they told us that spring was near at hand; the sun also came to throw his light upon them two hours earlier than he did a few weeks ago, and in the budding hedges we had already discovered the sky-stained eggs of the hedge-sparrow. Well can we remember the woods where we gathered the first primroses, and which were soon to be green with lilies of the valley. What a refreshing smell there was about the earth we dug up to get at the moss-covered roots of those early primroses, for they were the first treasures which we transplanted to our little gardens, where, day by day, they lost that beautiful bloom which they only bear in the solitude of the wildwood. The sounds of youthful voices seem in accordance with the opening of this happy season, as they fall at intervals upon the ear, filling up the pauses which occur between the singing of the blackbird or the thrush, and wafting pleasant memories to the wanderer, telling him that eager eyes are already watching the opening beauties of the flowers.

> I love to see the little goldfinch pluck
> The groundsel's feather'd seed, and twitting, twit;
> And soon in bower of apple-blossoms perched,
> Trim his gay suit, and pay us with a song—HURDIS.

Above a thousand years ago, our Saxon forefathers had no other landmarks to distinguish the boundaries of their estates than the objects of Nature—a tree, a bush, or a water-course, served them instead of walls and hedges; and we can almost fancy that we are overlooking those old English landscapes while reading one of their ancient deeds of conveyance. One estate is mentioned in a deed, dated 886, as stretching along from Sheep-lea to the Broad Bramble, past the Old Gibbet-place and the Old Ford, along the Deep-dell, to the Thorn on the Mere, thence to the Red-cross, by the stream of Alders, up the Milk-valley by the Foresters' Mark, and along the Hay-meadow. Another goes from the Bridge by the Eel-ditch, past the Bourn and the Great Willow, from the Hoary Thorn to the Oak-tree, by the Three Hills and the Thorn Maple to the Three Trees, the Deep Brook and the Clear Pool, by the Black Willow, the Nettle Island, the Sedge Moor, past the Burrows, the Hillock, the Ship Oak, the Great Aspen, by the Reedy Slough, and onward to the Hoary Apple Tree beyond the Wolf-pit.

What an assemblage of old poetical names have we here: we can see the half-drained and half-cultivated country; we can picture it in miry March with its reedy meres and impassable sloughs—the rude wooden bridge by which the ploughman crossed over the quaking bog to get at the rich land which lay beyond. Yet amid these wilds and old forest-fastnesses the violets and primroses blowed as they do now, and the Saxon serf was cheered by the skylark's song while he laboured in those old bedgeless wastes. The bleating of young lambs was then heard upon the wold—the ice-freed brooks rolled merrily along; and though he fared hard by day, and at night had a block of wood for his pillow, Nature was still his comforter, and he found solace in the sights and sounds, that greeted his eye and ear, when he wandered along over the opening daisies.

Although the trees are leafless, there is something about a mild sunny day at the close of March which tells us that all the out-of-door world is alive—that the very air which seemed so silent in winter now murmurs with life, while a thousands insects are dancing about overhead, as if rejoicing that the time of flowers is so near at hand. The winding roads have on such days a dry, warm, summer look, and you can scarcely peer under any hedge without discovering on the sun-lit bank the silent progress that spring is making; for here and there the starry celandine has thrown open its golden-rayed flower, and the furze hung out its burning blossoms, which shoot up like a thousand flames from a green chandelier. Now the first bee comes blundering abroad, and running his black head against everything, as if not yet thoroughly awake. You wonder where he has hidden himself all the long winter, for you see at a glance that he belongs to no hive, but has his home somewhere in the neighbouring wood. What a summer sound his booming gives to the air; depend upon it he knows where the broadest primroses and sweetest violets blow; but he has gone to ransack yonder furze-bush, and will soon be busy rifling the yellow blossoms;

> While the ploughman, near at hand,
> Whistles o'er the furrow'd land,

giving all the air a "countryfied smell," as he turns up the sleeping furrows, and causing you to sigh as you think of badly-drained streets and ill-ventilated houses, which you are doomed to breathe amongst in the City, places which rosy Health rarely plants her foot upon, for if she alights there the bloom upon her cheek at once begins to fade, and unless she hurries back to the breezy hills and greenwood sides, she will be compelled to bow her head in wan consumption's sickly lap.

So conducive to health is the aroma arising from the newly-ploughed earth, that we have frequently seen an invalid seated in a chair, secured to a kind of truck which was attached to the horses, and dragged along behind the ploughman, whose labour was not at all impeded by his passenger, excepting that it required more care when turning round at each end of the field. What heavy masses of clay at times cling to the ploughman's boots. You wonder how he manages to get along with such a clog to his heels; every stride he takes, the mass accumulates; and when, after many shakes, he gets rid of it, there lies a clod weighing pounds upon the furrow, the upper part bearing the impression of every nail in his boot. His hands are hard as horn through holding the plough; and if he has followed the same labour for years, there is a peculiar roundness about the shoulders which tells that the continued grasping of those bright shafts is no easy work.

The roads have a different appearance now from what they had a few months ago; there are more moving figures in the landscape, especially when it is market-day—such a scene as we have attempted to describe in a little poem, where

> Busy forms move o'er the landscape brown
> In twos and threes, for it is market-day.
> Beyond those hill's stretches a little town,
> And thitherward the rustics bend their way,
> Crossing the scene in red, and blue, and grey,
> Now by the hedge-rows, now by oak-trees old,
> As they by stile or low-thatched cottage stray.
> Peep through the rounded hand, then you'll behold
> Such scenes as Morland drew in frames of sunny gold
>
> A laden ass, a maid with wicker maun,
> A shepherd's lad driving his lambs to sell;
> Gaudy-dress'd girls move in the sunny dawn.
> Women whose cloaks become the landscape well
> Farmers whose thoughts on crops and prices dwell.
> An old man with his cow and calf draws near.
> Anon you hear the village carrier's bell;
> Then doth his grey old tilted cart appear,
> Moving so slow, you think he never will get there.

But "slow and sure" has been for years his motto; and he will not only get there in time for the market, but stop and halt at a little road-side house, the swing sign of which you can just distinguish by the white post that supports it, on the left at the foot of the hill.

Now in the ponds and ditches may be seen hundreds of little frogs, and tadpoles with their round heads and long tails, bearing, at present, no more resemblance to a frog, than an egg does to a living bird. They are devoured in millions by the fishes. If they miss the jaws of the finny tribe, there are the newts ready to prey upon them: if they escape the newts, there are no end of water-fowl on the look-out: the snake feeds upon them as soon as they can leap: stoats and weasels dine off them, when nothing better can be had; and they can scarcely move anywhere without meeting with an enemy. On no account ought frogs to be driven out of gardens that are infested with slugs; for these are a favourite food; and wherever frogs are found, the slugs soon disappear. The way in which the frog seizes its prey is by throwing its tongue forward. The action is quick as thought—no sooner is the tongue out than the slug has vanished: it is almost impossible for the eye to detect the action, it is so momentary. In winter the frog buries itself in the mud, at the bottom of ponds and ditches, where it remains until spring, when it comes forth; and you may then see on the top of the water a number of black spots floating in a jelly-like substance. These are the spawn, or eggs, in which the tiny tadpoles are enclosed. They possess the power of breathing through the skin; and it is no easy task to either hang or drown them. It is now stale information to state that the toad is not venomous, but is as perfectly harmless as the frog, and equally useful in gardens. It is an unnecessary cruelty to destroy these inoffensive reptiles: they have sufficient enemies without man waging war against them; he, of all, ought to be their protector.

I have a great love for those little dirty and noisy vagrants, the sparrows; who hide, and build, and breed under the smoky eaves, and come out, sometimes, as black as soot. Wherever man rears his house, they follow. They are always ready with their "good morning" as soon as it is light. They take possession above, and the mice below; both are paupers that will have no "nay." If man can contrive to live, they are resolved to live with him. For ages they have been his constant companions. The sparrow hops down and breakfasts with the fowls, without needing an invitation. He takes possession of the corn-rick, and helps himself bountifully. In summer, he goes into the harvest field, if it is near at hand; nor is he very particular about waiting until the corn is ripe, before he commences his banquet. In vain does the farmer set a price upon his head; he contrives to live, and die, and leave a large family of sparrows behind him, who know how to pick up a living as well as he did. The sparrows, like the rooks, have their mode of punishment; and when any culprit has committed himself, they raise a clamour loud enough to alarm a whole neighbourhood. It begins in a moment—they all set to at once; and when they have had their say, they leave the offender to his own reflections. They are hasty, but it is soon over with them: nor do they ever put their victim to death; but having beaten him, and told him their minds, they treat him as kindly as before. In one instance, when the house sparrows had undergone a long persecution, they beat a retreat, and built their nests in some adjoining trees—a proof, that, when compelled by danger, they could change their habits; and, like other birds, build amongst the branches, instead of under the thatch or beneath the eaves.

One of the great pleasures which a lover of nature finds in a March ramble, is the arrival of the birds, which keep dropping in by twos and threes, we know not from whence. Nearly first comes the little wryneck, with its beautiful plumage, so richly marked, that it is almost impossible to describe its varied colours. You know it at a glance; for it is always twisting the dark-lined head and neck over the shoulders. Then we see the tiny willow-wren, whose chirp may be heard until September. It is also elegantly marked—yellow, brown, and white, and fond of frequenting the osier-beds. The titmouse and yellow-hammer also begin to sing; and together with the skylark, blackbird, throstle, woodlark, wren, and several others, there is already such a spring concert opened, as makes a lover of nature leave his chimney corner, and go forth to listen to their "sweet piping."

> Sweet were the sounds which through the green vale flow'd:
> The gentle lambs bleated all summer long;
> The spotted heifer from the upland lowed;
> The speckled thrush struck up its piping song;
> A mournful "coo" the blue wood-pigeon made,
> Now high, now low, now lost—just as the spring breeze played.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above horizon	SUN. Sets	MOON. Rises. Morning.	MOON. Souths. Afternoon.	MOON. Height above horizon	MOON. Sets. Morning.	Moon's Age	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 3h. 4h.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 8h. 9h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	PALM SUNDAY	5 38	3 56	43 1/4	6 31	11 42	7 32	54 1/4	2 26	8			7 50	8 30	91
2	M	2nd Day in Pas-	5 36	3 38	43 1/3	6 33	Afternoon	8 25	51 1/4	3 10	9			9 15	9 59	92
3	Tu	sion Week	5 34	3 20	44	6 35	2 4	9 16	48 1/4	3 45	10			10 40	11 25	93
4	W	*St. Ambrose*	5 31	3 2	44 1/4	6 37	3 15	10 5	43 1/3	4 17	11			At Noon.	No Tide.	94
5	Th	Maundy Thursd.	5 29	2 44	44 1/4	6 38	4 23	10 52	41 1/4	4 43	12			0 28	0 55	95
6	F	GOOD FRIDAY	5 27	2 26	45	6 40	5 31	11 37	36 1/4	5 10	13			1 20	1 40	96
7	S	Castor souths at 6h. 2m. P.M.	5 24	2 9	45 1/3	6 41	6 37	Morning.	32	5 32	●			2 0	2 15	97
8	S	EASTER SUNDAY	5 22	1 52	45 2/3	6 43	7 43	0 22	28 1/4	5 57	15			2 35	2 50	98
9	M	Easter Monday	5 20	1 35	46 1/4	6 44	8 47	1 7	25	6 23	16			3 10	3 25	99
10	Tu	Easter Tuesday	5 18	1 18	46 1/3	6 45	9 49	1 52	22 1/4	6 50	17			3 40	4 0	100
11	W	Procyon souths 6h. 12m. P.M.	5 15	1 2	47	6 47	10 48	2 38	20 1/4	7 21	18			4 15	4 30	101
12	Th	Pollux souths 6h. 13m. P.M.	5 13	0 46	47 1/4	6 48	11 42	3 24	19 1/4	7 56	19			4 45	5 0	102
13	F	Alpha Hydræ souths 7h. 53m. P.M.	5 11	0 30	47 1/3	6 50	Morning.	4 11	18 1/3	8 38	20			5 20	5 35	103
14	S	[Easter T. begins	5 9	0 15	48	6 52	0 32	4 59	20 1/3	9 25	21			5 54	6 10	104
15	S	LOW SUNDAY.	5 7	At Noon.	48 1/4	6 54	1 18	5 47	20 1/4	10 18	☾			6 35	7 0	105
16	M	Passage of the Ky-	5 5	Before 12 o'clock.	48 3/4	6 55	1 59	6 35	23 1/4	11 16	23			7 25	8 0	106
17	Tu	her Pass by Gen. Pollock, 1842.	5 2	0 30	49	6 57	2 34	7 23	26 1/4	Afternoon	24			8 40	9 20	107
18	W	Oxford and Cam-	5 0	0 43	49 1/3	6 59	3 6	8 12	30 1/4	1 26	25			10 0	10 35	108
19	Th	bridge Term begins.	4 58	0 57	49 2/3	7 1	3 35	9 1	34 1/3	2 37	26			11 10	11 45	109
20	F	Regulus souths 8h. 6m. P.M.	4 56	1 10	50	7 2	4 2	9 52	39 1/4	3 48	27			No Tide.	0 13	110
21	S	Beta Leonis souths 9h. 42m. P.M.	4 55	1 23	50 1/3	7 4	4 30	10 43	44	5 8	28			0 38	1 0	111
22	S	2ND S. aft. EAST.	4 53	1 35	50 2/3	7 6	5 0	11 37	—	6 28	○			1 20	1 40	112
23	M	*St. George*	4 51	1 47	50	7 8	5 28	Afternoon	48 1/3	7 48	1			2 0	2 20	113
24	Tu	Spica Virginis souths 11h. 5m. P.M.	4 49	1 58	51 1/3	7 10	6 6	1 30	52 1/4	9 7	2			2 45	3 5	114
25	W	*St. Mark Evan.*	4 47	2 9	51 2/3	7 11	6 47	2 30	55	10 20	3			3 25	3 50	115
26	Th	Princess Alice M. born, 1843.	4 45	2 19	52	7 13	7 37	3 31	56 1/3	11 26	4			4 10	4 35	116
27	F		4 43	2 29	52 1/3	7 14	8 34	4 30	56 1/3	Morning.	5			4 55	5 20	117
28	S	Eta Boötis souths 11h. 20m. P.M.	4 41	2 38	52 3/4	7 16	9 36	5 28	55	0 23	6			5 45	6 10	118
29	S	3RD S. aft. EAST.	4 39	2 47	53	7 17	10 44	6 22	52 3/4	1 11	☽			6 40	7 10	119
30	M	Arcturus souths 11h. 33m. P.M.	4 37	2 56	53 1/4	7 19	11 55	7 14	49 1/3	1 49	8			7 40	8 20	120
											9					

APRIL.

The Sun is in the sign Aries till the 20th; on which day, at 5h. 34m. A.M., he enters the sign Taurus (the Bull.)

On the 1st he is 95,010,000 miles from the earth. He *rises*, on the 1st, at 7°¼ N. of E.; on the 7th, at ½° S. of E. by N.; and on the 28th, at E.N.E.; he *sets* on the same days at 7°¼ N. of W.; at W. by N., and at ¼° N. of W.N.W. respectively. His times of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The Moon is in Taurus on the 1st; Cancer on the 2nd; Leo on the 3d, 4th, and 5th; in Virgo from the 6th to the 10th; in Ophiuchus on the 11th, 12th, and 13th; near both Aquila and Sagittarius on the 14th and 15th; in Capricornus on the 16th, in Aquarius on the 17th, 18th, and 19th; in Pisces on the 20th; in Cetus on the 21st; in Pisces on the 22nd; in Cetus again on the 23rd; in Taurus on the 24th, 25th, and 26th; in Taurus on the 27th and 28th; in Cancer on the 29th; and in Leo on the 30th.

She *rises* before the Sun sets, till the 5th; during the night, till the 21st; and after sunrise, from the 22nd. She *sets* before sunrise, till the 6th; during the day till the 22nd; and after sunset, from the 23rd. For the actual times, see the opposite page.

She is on the Equator on the 6th and on the 21st. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Jupiter on the 2nd; Mars on the 19th; Saturn on the 20th; Mercury and Uranus on the 22nd; Venus on the 24th; and Jupiter again on the 29th.

She is full on the 7th, and new on the 22nd, but without an Eclipse at both times.

Mercury is in the constellation Pisces till the 11th; in that of Cetus from the 12th to the 19th; in Pisces from the 20th to the 25th; in Cetus on the 26th and 27th; and in Aries from the 28th.

He is a morning star; and rises on the 1st at 30m.; on the 15th, at 19m.; and on the last day, at 5m. before the Sun. He is not well situated for observation. He sets before the Sun throughout the month. He rises on the 3rd, at E. by S.; on the 14th, at the E.; on the 23rd, at E. by N.; and on the last day, at 1°½ S. of E.N.E. He is moving eastward among the stars throughout the month; he is near Saturn on the 11th; the Moon on the 22nd; and Uranus on the 23rd; as is shown in the annexed diagram, exhibiting the paths of these Planets in the heavens during the month.

PATHS OF MERCURY, SATURN, AND URANUS, WITH RESPECT TO EACH OTHER AND TO THE FIXED STARS, DURING THE MONTH OF APRIL, 1849.

Scale, 12 degrees to one inch.

Venus is in the constellation Taurus throughout the month.

She is an evening star, and sets at 10h. 56m. P.M., on the 1st; at 10h. 57m. on the 6th; at 10h. 49m. on the 12th; at 10h. 31m. on the 18th; at 10h. 9m. on the 24th; and at 9h. 35m. on the 30th; at 4° N. of N.W. by N. on the 1st; and at 6½° N. of N.W. by N. on the last day. She is moving eastward among the stars from the 1st to the 19th; is stationary among them on the 20th and 21st, and is moving slowly westward from the 22nd to the 30th. She is at her greatest brilliancy on the 7th, and is near the Moon on the 24th; she is near the Pleiades all the month, at first approaching, then receding, and then approaching them again, as is shown in the annexed cut. Her telescopic appearances during this month and that of May, is shown in the next month.

RELATIVE POSITIONS OF VENUS WITH RESPECT TO THE FIXED STARS, IN APRIL, 1849.

Scale, 3 degrees to one inch.

Mars is in the constellation of Aquarius till the 27th, on which day he passes into Pisces.

He is a morning star, and rises on the 1st at 4h. 23m. A.M., at 1° S. of E.S.E; on the 3rd, at 4h. 18m. A.M. at the E.S.E.; on the 29th, at 3h. 13m. A.M., at the E. by S. point of the horizon (his times of southing are given below), and he sets at about 2h. P.M. He is moving eastward among the stars, and is near the Moon on the 19th.

Jupiter is in the constellation Cancer throughout the month.

He is an evening star, and rises between 10h. A.M. and noon; souths at an altitude of about 56°, and sets on the 1st at 4h. 1m. A.M. at 6°½ N. of W.N.W., and on the last day at 2h. 9m. A.M., at 6° N. of W.N.W.

He is nearly stationary among the stars till the 21st; and after this time he moves slowly eastward. He is near the Moon on the 2d, and again on the 29th.

Jupiter's Satellites.—The Emersions of the 1st and 2nd are visible; those of the 1st appear at the distance of one half, and those of the second at the distance of one diameter nearly. On the 13th an Immersion and Emersion of the 3rd are visible; the former occurs at a distance somewhat greater than one diameter, and the latter at two diameters, to the left of the Planet as seen through a non-inverting telescope, and to the right as seen through an inverting telescope.

Saturn is in the constellation Cetus throughout the month.

He is a morning star towards the end of the month, and rises, on the 15th, at 4h. 38m. A.M., and on the 30th, at 3h. 42m. A.M., a little S. of the E. point of the horizon. He moves eastward among the stars; is near Mercury on the 11th, and the Moon on the 20th.

Uranus sets near the W. by N. on the 1st at 7h. 26m. P.M., and on the last day at 6h. 41m. P.M. He moves slowly eastward among the stars; and is near the Moon on the 22od, and Mercury on the 23rd.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Afternoon	Mars Morning.	Jupiter. Afternoon	Saturn. Morning
	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 32	2 39	9 10	8 21	11 24
6	10 39	2 31	9 5	8 1	11 6
11	10 47	2 20	9 0	7 42	10 49
16	10 58	2 6	8 55	7 22	10 31
21	11 11	1 48	8 50	7 3	10 14
26	11 28	1 26	8 44	6 44	9 56
30	11 43	1 6	8 40	6 30	9 42

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Emersion. E.	Eclipses of 2nd Sat. Immersion. I.
D. H. M.	D. H. M.
4 2 3 A.M. E.	7 11 6 P.M. E.
5 8 32 P.M. E.	15 1 43 A.M. E.
12 10 27 P.M. E.	3rd. Sat.
20 0 22 A.M. E.	6 7 30 P.M. E.
28 8 46 P.M. E.	13 7 56 P.M. I.
	13 11 30 P.M. E.
	20 11 56 P.M. I.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
Beta Virginis	3½	5 6 45 P.M.	Dark
		5 7 54 P.M.	Bright

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Full Moon	..	7D	3h. 50M.	P.M.
Last Quarter	..	15	7 8	P.M
New Moon	..	22	11 54	P.M.
First Quarter	..	29	2 17	P.M.
Apogee	..	12	10	A.M
Perigee	..	24	10	A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination South.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination South.	Uranus. Right Ascension	Uranus. Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	23h. 11m	7° 44′	3h. 18m	23° 34′	21h. 48m	14° 35′	9h. 1m	18° 0′	0h. 2m	2° 0′	1h. 21m	7° 54′
6	23 37	5 10	3 30	24 36	22 3	13 19	9 1	18 1	0 5	1 46	1 22	8 1
11	0 6	2 6	3 38	25 22	22 18	12 0	9 1	18 1	0 7	1 32	1 23	8 7
16	0 36	North.	3 44	25 50	22 33	10 39	9 1	17 59	0 9	1 18	1 24	8 14
21	1 9	5 19	3 46	25 57	22 47	9 15	9 2	17 55	0 11	1 5	1 25	8 20
26	1 45	9 30	3 44	25 40	23 1	7 50	9 3	17 51	0 13	0 52	1 26	8 26

A fool! a fool!——I met a fool i' the forest.
A motley fool! a miserable world!
As I do live by food, I met a fool.
"Good morrow, fool," quoth I.—SHAKSPEARE.

WHAT merry "quirks and cranks" have we seen played on April-fool Day! What gushes of laughter have rung out, as one after another was beguiled by this harmless foolery! Who ever forgot the old shoemaker's shop by the road-side, where we sent some witling for a pennyworth of stirrup-oil, and who invariably got thrashed by the old cobbler's stirrup-leather? At any hour we can picture the sheepish look of the boy—see him holding out his saucer, while a twinkling of merriment gathered about the wrinkled corners of the old man's grey eyes, as he unloosed the strap from his foot and knee; and, although the hardest blow he struck would scarcely have killed a fly, yet what roars of hearty laughter we sent forth as we saw the little simpleton scamper off, and beheld the merry shoemaker shaking his strap as he stood at his shop-door, in the sunshine of an April morning. Then there was pigeon-milk to be sent for at the milk-house; and here, perhaps, the tables were turned upon us, for the youth we sent, although he pretended ignorance, took the mug and the penny, and going in at once, asked for a halfpennyworth of milk, put the other halfpenny in his pocket, then came out boldly, and said, "Here it is;" while we looked at each other, and confessed that he had made April fools of us. Then what shoes we said were untied—handkerchiefs dropped—hats crushed—black spots on the face, which we sent them to the glass to look at—where they only got laughed at for their pains.

Wicked and not always harmless errands did we also send others upon. Mr. Somebody wanted to borrow the large brewing tub, and the lender went toiling with it in a barrow: the load was almost more than he could wheel; and when he arrived at his journey's end, the pretended borrower only called him an April fool. He had his joke, and we our laugh; but never again had he the loan of the brewing tub. We sent the doctor post-haste to some one who was hearty and well, and probably busied in his garden. We had the fire-engine brought a mile or two; then laughed at the old man as we pointed out the leaden pump for him to play upon. Pigs had fallen into imaginary wells; horses and donkeys we pounded, then laughed at the owners, who never for a moment thought of looking into their own fields or stables until they returned. Yet very rarely did these tricks provoke any anger; all was considered fair on April-fool Day, for every one was disposed to be merry; and very often the laugh was as loud on the part of the deceived as the deceivers, and small sympathy did he obtain who lost his temper on the first of April.

Even grave sober matrons unbent their staid brows at our jokes; they recalled

the days when they also were young, and had their jokes—when they got their lovers to hunt for a needle they had never dropped, or to stoop for a cotton-ball which was safely deposited in their laps. Such tricks seem to sit lightly, even on the conscience of old age; they bring no regrets. Though we have known a swain sent ten miles to see his sweetheart, by an urgent letter, yet the laugh they enjoyed together seemed, somehow, to sweeten the long and unnecessary journey. April-fool Day was a merry time with our forefathers, who appear never to have lost a chance of making themselves happy whenever they could.

Spring-time stirred the blood of the great father of English poetry, Chaucer. He could not lie in bed when the daisies were opening. He tells us that he then found no delight in his books; that when he heard the birds sing, and saw the flowers beginning to blow, he bade farewell to his study; that he loved the daisies above all the flowers that grew; that scarcely a morning dawned in spring but what he rose early. As he himself says:—

——I am up and walking in the mead,
To see this flower against the sun spread.
When it upriseth, early on the morrow,
That blissful sight softeneth all my sorrow.
So glad am I, when that I have presence
Of it, to do it all reverence,
As she that is of all flowers the flower,
Fulfilled of all virtue and honour.
And ever alike fair, and fresh of hue.
And ever I love it, and ever alike new,
And ever I shall, till that mine heart die.
There loveth no one hotter in his life,
And when that it is eve I run blithe,
As soon as ever the sun sinketh west,
To see this flower how it will go to rest,
For fear of night—so hateth she darkness.
Her cheer is plainly spread in the brightness
Of the sun—for there it will unclose.

There has been a great outcry of late amongst many good and well-meaning people against the capturing and rearing of young birds. They have pronounced it barbarous and cruel in the extreme, however kindly they may be reared. Now this is a strange contradiction. Kindness cannot be cruelty, even if misapplied. Youth of both sexes who rear up birds do their utmost generally to keep them alive; and we have no hesitation in asserting that an attendance upon the wants of these little chirrupers cultivates kind and affectionate feelings, softens the heart, and contributes towards the making of better men and women than they would otherwise have grown into, had it not been for these necessary attentions. A girl will weep, and a kind-hearted boy be sorry, for the death of a favourite bird. And while such things help to refine the feelings, and are unaccompanied by cruelty, it is surely better that a half-fledged nestling should perish, now and then, through excess of kindness, than such virtuous emotions be stifled. We dare not put the number of young birds that are carried off, and devoured by hawks, weasels, &c., against the few that die through over-nursing; although a good argument might be twisted out of such matter.

But, whatever may be said about birds, no such charge can be brought against flowers, and as the following passage, which we wrote some years ago in praise of these "bowing adorers of the gale," has appeared in several publications without the acknowledgment of our name, we think it but justice to claim our own:—

"Who would wish to live without flowers? Where would the poet find his images of beauty, if they were to perish? Are they not the emblems of loveliness and innocence, and the living types of all that is pleasing and graceful? We compare young lips to the rose, and the white brow to the radiant lily; the winning eye is like as the violet, and the sweet voice like a breeze kissing its way through the flowers. We hang delicate blossoms on the silken ringlets of the young bride, and strew her path with fragrant flowers as she leaves the church. We place them around the marble face of the dead in the narrow coffin, and they become emblems of our affections—of pleasures remembered and hopes faded—wishes vanished, and scenes cherished in memory, all the more, because they can never return. We look to the far-off spring in other vallies—to the eternal summer beyond the grave, where flowers that never fade bloom in those starry fields, which no chilly winter ever blew over. They come upon us in spring like the remembrance of a pleasant dream—a vision that hovered above us in sleep, peopled with shadowy beauties and simple delights, embroidered with the richest hues of fancy. Sweet flowers!—that bring back again the scenes of childhood—faces remembered in youth—the love that knew not it was love!" Even in our rooms they conjure up images of the mossy bank by the wayside, where we so often gazed upon the early primroses. They recal the sheltered glen, darkly green, filled with the perfume of violets, that showed like another sky amid the scene. The sweet song of the village maiden again rings upon our ears while we gaze on them, and we remember those modest eyes "that ever loved the ground," and the time we first beheld them—

Fix'd as a pilgrim's—wilder'd in his way,
Who dare not stir by night, for fear to stray,
But stands with awful eyes to watch the dawn of day.—DRYDEN.

What a mystery seems to hang about an old wood when the trees are covered with leaves, and the underwood is thick and impassable. We know not what flowers are growing in those untrodden solitudes; we cannot tell what birds build and hide in those hidden coverts; what badgers, weasels, polecats, martens, and snakes burrow, hide, climb, and hask, under ground and in the hollows of trees, about the great mossy branches, and on the unexplored banks, which accumulated leaves, and natural water-courses, and huge fallen trees have formed. It is this very difficulty of seeing beyond the few feet around us, that makes a wood so solemn. A hill or a moorland may be lonely, but there the view is open, whereas in the heart of an old wood all around us is dim, shadowy, green, and mysterious. Many of the trees are large and aged; and we feel that we are in the presence of strange things, that have grown old in light and darkness for centuries; that they have outlived all other living things, and around them there hangs a kind of reverential awe, such as makes us marvel not that in the early ages, when England was first peopled, they were worshipped by the Druids and their followers. Then we come upon deep dells, over which the gnarled and withered stem leans, and the foliage darkens, and we marvel how these great hollows were first formed, for nowhere do they hear a trace of the hand of man. We know that the ancient Britons kept their corn in subterraneous places, which have slept undisturbed through the silence of many centuries. All traces of the work of these early excavations is buried beneath the accumulated gatherings of a thousand autumns and winters, which have cast down and rotted their leaves.

Here quivering aspens bow before the gale,
And hawthorns blossom hid in sunless shade;
The mournful ring-dove coos her tender tale,
The holly's shining leaves are here display'd,
While silver birches overhang the glade;
The towering elm shelters the dusky rook,
The hazel in green beauty is arrayed,
The alder hangeth o'er the crisped brook
In which the wildwood flowers in silence ever look.

And in such a spot the sudden starting of a large pheasant from out the deep underwood, as it goes with a loud "whur-r-r" high up amid the foliage, causes the lonely wanderer to spring back unconsciously, though he smiles the next moment at this needless alarm.

As Angling has already commenced, we shall glance at a few of the finny inhabitants of our streams and rivers; first beginning with the sticklebach, with its three spines, which can either be raised or lowered at will, and which seems fit for nothing but food for other fishes and the amusement of boys. "I know not," says quaint old Izaak Walton, "where he dwells in winter, nor what he is good for in summer." He is, however, a great ornament to a glass globe; his colours are splendid; and by a constant changing of the water every two or three days, he has lived in his glass house for two or three years. The minnow, which first appears in March, although so small, has a flavour equal to many of our more celebrated fish, especially when fried with the flowers of primroses and cowslips, and the yolks of eggs and butter—a dish delicate enough for the most imaginative of poets, though it was at one time very common. In Summer they are full of spawn, and not so good as in spring. Everybody knows that a small red worm is a sufficient bait, that three or four hooks may be used at once, and sometimes as many fish be drawn out at a time, for they always bite eagerly.

The bull-head, or miller's-thumb, with its immense head, large mouth, and spiny teeth, though anything but pleasant to look upon, forms an excellent dish, and those who have never tasted it will be agreeably surprised when they partake of one, and regret that they are not to be met with oftener at the fishmonger's. He is very fond of hiding under a stone, beside which, if a worm be dropped down gently, he will dart upon it in an instant, for he never stops to consider a moment about the matter if the hook is well concealed.—The loche we have often caught in the river Trent; it is a long fish, without either scales or teeth, bearded like a barbel. It is often used as a bait, especially for eels. Next in succession comes the gudgeon, which, though "little, is good;" it is well known to the London angler, being plentiful in the Lea river—that river of old historical associations, where English Alfred drew off the water and left the fleet of Hastings, the celebrated Sea-king, high and dry aground. It is rather a handsome-looking fish, broad in the middle, with a beautifully marked tail and back fin, and may be caught either with worm, gentle, or paste. The bait must touch the ground. It is fond of a gravelly situation. The bleak, or whiting, is a well-known fish, always on the move; is about six inches long, with large eyes, a small head, and silvery gills: the back is of a beautiful green colour. They are famous fly-catchers, and, from their rapid motions, are called water-swallows. Two or three hooks may be used, as in minnow fishing, and the same baits as for gudgeons. The flavour is very indifferent.

The dace, dart, shallow, dare, or by whatever name it is called, is a fast breeder, and during the summer months, very partial to playing about on the sunny surface of the water. It is found in many of our rivers, and appears to prefer such spots as are in constant motion, through the rolling of rapid currents and eddies. In cold weather it prefers a quiet hole, or the sheltered part of a stream overhung by the tall water-flags or tufted rushes. Its body is rather long, the back of palish green, varied with dusky marks, while the belly has a silvery appearance, and the fins a pale red tinge. It will almost take any bait in spring; neither worms, larvæ of beetles, grubs, caterpillars, or even water-snails, come amiss to it. They are sharp quick biters, requiring to be struck suddenly; and, as they are not to be drawn out without a good struggle, it is necessary to use strong tackle. Blaine makes mention of a pie made of dace and roach, which seems to have been

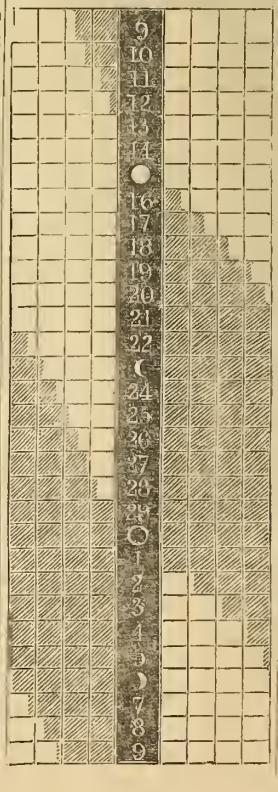
A dainty dish to set before a King;
For when the pie was open the guests began to sing.

And, according to his account, they would willingly have dined off such a pie, once a week, at least, as long as they lived. Roach-fishing so nearly resembles that of dace, that we shall not pause to describe it. The beautiful gold-coloured circle of the eye and the rich red fins are familiar to those who have seen the roach in good condition; nor is it to be mistaken, on account of its great breadth when laid on its side. It affords excellent sport to the angler, and has been caught from a pound to two, or more, in weight. We pass by the rudd, a fish which has led to much discussion, some considering it a species of dace, and others of carp, and come to the bream, with its high arched back, forked tail, and large eyes. When in fine condition and a good size, the bream has a rich golden colour, in place of the silvery hue it before wore. They are a cautious race, and the angler ought not to throw his shadow upon the water, but keep himself as much out of sight as possible. A warm, cloudy day is considered the most favourable for biting, and a red worm the best of baits. He is a fish rather too fond of sucking the bait, but this can be easily detected by watching the float: for our part, we never struck in too great a hurry when we detected this half-nibbling; the better plan, we think, is to let him get well hold, or go if he chooses, though it is necessary to examine the bait after his departure. We must reserve a few remarks on this old and pleasant occupation for next month.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Afternoon.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.	
1	Tu	*Philip. James*	4 35	3 3	53¾	7 21	1 6	8 3	45¾	2 20	121
2	W	Regulus souths 7h. 18m. P.M.	4 33	3 11	54	7 23	2 15	8 50	41¾	2 48	122
3	Th	Invent. of Cross.	4 31	3 17	54¼	7 24	3 21	9 35	37½	3 14	123
4	F	Beta Leonis souths 8h. 30m. P.M.	4 29	3 24	54½	7 26	4 28	10 20	33½	3 38	124
5	S	[*St. John.*	4 28	3 29	54¾	7 27	5 33	11 4	29½	4 2	125
6	S	4TH S. aft EASTER	4 26	3 35	55	7 29	6 37	11 49	26	4 26	126
7	M	[East. Term ends	4 24	3 39	55½	7 30	7 39	Morning.	23	4 53	127
8	Tu	Half Quarter.	4 22	3 43	55¾	7 32	8 39	0 34	20¾	5 22	128
9	W	Corporation and	4 21	3 47	56	7 34	9 37	1 20	19½	5 56	129
10	Th	Test Acts repealed, 1828	4 19	3 50	56¼	7 35	10 29	2 7	18¾	6 35	130
11	F	Spica Virginis souths 9h. 58m.	4 17	3 52	56½	7 36	11 16	2 54	19	7 19	131
12	S	[Old May Day.	4 16	3 54	56¾	7 38	11 58	3 42	20	8 10	132
13	S	ROGATION SUN.	4 14	3 55	57	7 39	Morning.	4 29	22	9 4	133
14	M	The ILLUSTRATED LONDON NEWS was first published on May 14, 1842	4 12	3 55	5 ¼	7 41	0 35	5 17	24¾	10 5	134
15	Tu		4 11	3 55	57½	7 42	1 7	6 4	28¼	11 9	135
16	W	Zeta Bootis souths 10h. 9m. P.M.	4 10	3 54	57¾	7 44	1 36	6 52	32¼	Afternoon	136
17	Th	ASCENSION DAY.	4 8	3 53	58	7 45	2 4	7 41	36¾	1 29	137
18	F	[*Holy Thursday*	4 7	3 51	58	7 47	2 31	8 30	41½	2 42	138
19	S	*St. Dunstan.*	4 5	3 49	5 ¼	7 48	2 57	9 21	46¼	3 59	149
20	S	SUN aft ASC. DAY	4 4	3 46	58½	7 49	3 26	10 15	50½	5 18	140
21	M	Arcturus souths at 10h. 10m. P.M.	4 3	3 42	58¾	7 51	3 59	11 12		6 39	141
22	Tu	Trin. Term begins	4 1	3 38	59	7 52	4 37	Afternoon	53¾	7 58	142
23	W	Epsilon Bootis souths at 10h. 33m. P.M.	4 0	3 34	59¼	7 53	5 23	1 14	56	9 10	143
24	Th	Qu Vic. born 1819	3 59	3 29	59¼	7 55	6 18	2 16	56¾	10 14	144
25	F	Pr Helena b 1846	3 58	3 23	59½	7 57	7 21	3 17	56	11 7	145
26	S	Ox. Term ends	3 57	3 17	59¾	7 58	8 29	4 15	54	11 50	146
27	S	PENTECOST. Whit	3 56	3 10	59¾	7 59	9 41	5 9	51	Morning.	147
28	M	SUNDAY. Camb. Term divides.	3 55	3 3	60	8 0	10 54	6 0	47¼	0 25	148
29	Tu	K. Chas. II. rest.	3 54	2 56	60¼	8 1	Afternoon	6 48	43¼	0 54	149
30	W	Ember Week. Ox.	3 53	2 48	60¼	8 2	1 12	7 34	39	1 21	150
31	Th	Term begins	3 52	2 40	60½	8 3	2 20	8 19	34¾	1 44	151

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 1h. 2h. 3h. | Moon's Age. | After Sunset. O'Clock. 9h. 10h. 11h.



HIGH WATER AT LONDON BRIDGE.

Morning. H. M.	Afternoon H. M.
9 0	9 40
10 20	11 0
11 33	At Midnight
No Tide.	0 27
0 50	1 12
1 33	1 53
2 10	2 25
2 45	3 0
3 15	3 30
3 50	4 5
4 20	4 35
4 55	5 10
5 30	5 50
6 10	6 35
7 0	7 27
8 0	8 37
9 15	9 50
10 25	11 0
11 30	11 55
No Tide.	0 25
0 45	1 10
1 35	1 55
2 20	2 45
3 10	3 35
3 55	4 20
4 45	5 10
5 35	6 0
6 30	6 57
7 30	7 57
8 32	9 15
9 45	10 15

MAY.

The Sun is in the sign Taurus till the 21st, on which day, at 5h. 18m. A.M., he enters Gemini (the Twins). On the 1st he is 95,792,000 miles from the earth. He *rises* on the 1st, at 1°½ N. of E.N.E.; and on the 25th, at the N.E. by N. He *sets* on the 1st at 1°¾ N. of W.N.W.; and on the 25th, at the N.W. by N. points of the horizon. His times of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The Moon is in the constellation Leo on the 1st and 2nd; and in Virgo from the 3rd to the 5th; in Libra from the 6th to the 8th; in Ophiuchus on the 9th and 10th; near Aquila and Sagittarius on the 11th and 12th; in Capricornus on the 13th; in Aquarius from the 14th to the 16th; in Pisces on the 17th; in Cetus on the 18th; near both Cetus and Pisces on the 19th; in Cetus on the 20th and 21st; in Taurus on the 22nd and 23rd; in Gemini on the 24th and 25th; in Cancer on the 26th; in Leo from the 27th to the 29th; and in Virgo till the end of the month.

She *rises* before the Sun sets, till the 6th; during the night, till the 21st; and after the Sun rises, from the 22nd. She *sets* before the Sun rises, till the 6th; during the day, till the 21st; and after the Sun sets, from the 22nd: for the actual time, see the opposite page.

She is on the Equator on the 3rd, on the 18th, and on the 31st. Her time of southing, in common clock time, and her height in degrees at the same time are given for every day on the opposite page.

She is near Mars and Saturn on the 18th, Uranus on the 19th, Venus on the 21st, Mercury on the 23rd, and Jupiter on the 23rd.

She is full on the 7th, and new on the 22rd, but without an Eclipse at both times.

Mercury is in the constellation Aries till the 6th; in Taurus from the 7th to the 27th; and in that of Gemini from the 28th.

He is an evening star from the 4th; and sets on the 10th at 50m.; on the 15th, at 1h. 24m.; on the 20th, at 1h. 50m.; on the 25th, at 2h. 3m.; and on the 31st, at 2h. 6m. after the Sun sets. These intervals of time are the longest in the year. At the end of this month, and the beginning of the next, this Planet is more favourably situated for observation than at any other time during the year. He sets on the 1st at the W.N.W.; on the 10th, at N.W. by N.; and on the last day, at 7° N. of N.W. by N. He is moving eastward among the stars during the month; is near Venus on the 8th, and the Moon on the 23rd. On the 3rd he is in superior conjunction with the Sun. His motion among the stars is very rapid after the middle of the month; and his path is shown in the annexed diagram, together with his telescopic appearance at different times in the month.

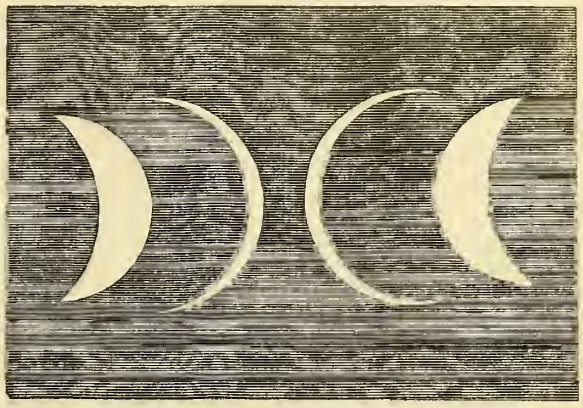
PATH OF MERCURY FROM MAY 12 TO MAY 31 WITH RESPECT TO THE FIXED STARS, AND THE TELESCOPIC APPEARANCE OF THE PLANET.

The appearances of the planet are drawn upon a scale of 40 seconds of arc to one inch; and the path of the planet is on a scale of 12 degrees to one inch.

Venus is in the constellation Taurus till the 10th, and in that of Aries from the 11th to the 31st.

She is an evening star till the 14th, and a morning star after this time. She sets on the 1st at 9h. 27m. P.M.; on the 6th, at 8h. 49m.; and on the 14th, at 7h. 41m. P.M. She rises on the 14th at 3h. 40m. A.M.; and on the last day, at 2h. 47m. A.M. She sets, on the 1st, at 6°¾ N. of N.W. by N.; and on the 14th, at the N.W. by N. She rises, on the 14th, at N.E by N.; and on the 31st, at 2° N. of E.N.E. She is moving slowly westward among the stars throughout the month; is near Mercury on the 8th, and the Moon on the 21st. She is in inferior conjunction with the Sun on the 12th. Her telescopic appearance undergoes rapid changes during the months of April, May, and June; as shewn in the annexed engraving. The first appearance is that of the Planet about April 7; the second is that towards the end of April; the third is that towards the end of May; and the fourth is that about the middle of June.

TELESCOPIC APPEARANCES OF VENUS DURING THE MONTHS OF APRIL, MAY, AND JUNE, 1849.



April 7. April 27. May 25. June 18.

Scale, 40 seconds of arc to one inch.

Mars is in the constellation Pisces till the 20th, on which day he passes into Cetus.

He is a morning star; and rises, on the 1st, at 3h. 8m. A.M. at 1° N. of E. by S.; on the 23rd, at 2h. 7m. A.M., at the E.; and on the 31st, at 1h. 47m. A.M. His times of southing are given below; and he sets at about 2h P.M. He is moving eastward among the stars; is near the Moon on the 18th, and Saturn on the 25th.

Jupiter is in the constellation Cancer till the 16th; and in that of Leo from the 17th.

He is an evening star, and rises between 9h. and 11h. A.M.; souths at an altitude of 56°¾ on the 1st, decreasing to 55°¾ on the last day; and sets on the 1st at 2h. 5m. A.M., at 6° N. of W.N.W., and on the last day at 0h. 13m. A.M., at 4°¾ N. of W.N.W. He is moving eastward among the stars; and is near the Moon on the 27th.

Jupiter's Satellites.—The Emersions of the 1st, 2nd, and 3rd are visible those of the 1st take place at the distance of one half; those of the 2nd at the distance of one; and that of the 3rd at the distance of one and a half diameter from the body of the Planet. An Immersion of the 4th satellite takes place on the 11th, and it disappears at the distance of one diameter. All these phenomena take place on the left hand of the Planet as seen through a non-inverting telescope, and on the right hand as seen through an inverting telescope.

Saturn is in the constellation Cetus throughout the month. He is a morning star; and rises on the 1st, at 3h. 38m. A.M.; on the 15th, at 2h. 46m. A.M.; and on the 31st, at 1h. 45m. A.M.; on the 19th he rises at the east point of the horizon; is moving eastward among the stars, and is near the Moon on the 18th.

Uranus rises a little N. of E. by N. on the 1st, at 3h. 3m. A.M.; and on the last day at 2h. 7m. A.M. He is moving slowly eastward among the stars, and is near the Moon on the 19th.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Afternoon	Mars. Morning	Jupiter. Afternoon	Saturn. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 47	1 0	8 39	6 26	9 38
6	Aftern.	0 31	8 33	6 8	9 21
11	0 33	At noon.	8 27	5 50	9 3
16	0 55	Morn.	8 22	5 32	8 45
21	1 15	11 0	8 16	5 15	8 27
26	1 30	10 34	8 10	4 58	8 9
31	1 39	10 11	8 4	4 41	7 51

JUPITER'S SATELLITES.

Eclipses of 1st. Sat. Emersion. E.	Eclipses of 2nd. Sat. Immersion. I.
D. H. M.	D. H. M.
5 10 40 P.M. E.	9 10 51 P.M. E.
21 8 59 P.M. E.	3rd Sat.
28 10 55 P.M. E.	26 11 26 P.M. E.
	4th Sat.
	11 10 14 P.M. I.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
95 Virginis	6	5 10 25 P.M.	Dark
		5 11 25 P.M.	Bright
Kappa Virginis	4	6 3 8 A.M.	Bright
		6 3 42 A.M.	Bright
Eta Libræ	4½	7 11 15 P.M.	Bright
		8 0 35 A.M.	Dark
13 Virginis	6	30 10 0 P.M.	Dark
		30 10 55 P.M.	Bright
Eta Virginis	3½	30 10 26 P.M.	Dark
		30 11 34 P.M.	Bright

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Full Moon	..	7D. 7H. 7M. A.M.
Last Quarter	..	15 10 30 A.M.
New Moon	..	22 7 37 A.M.
First Quarter	..	28 11 23 P.M.
Apogee	.. ..	9 9 0 P.M.
Perigee	.. ..	22 6 0 P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination North.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination South.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination South.	Uranus. Right Ascension	Uranus. Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	2h. 24m	13° 47′	3h. 38m	24° 54′	23h. 16m	6° 22′	9h. 4m	17° 45′	0h. 15m	0° 40′	1h. 27m	8° 33′
6	3 6	17 51	3 28	23 39	23 30	4 54	9 6	17 38	0 17	0 28	1 28	8 39
11	3 49	21 17	3 17	21 59	23 44	3 25	9 8	17 30	0 19	0 17	1 29	8 44
16	4 32	23 46	3 5	20 4	23 58	1 56	9 10	17 21	0 21	0 6	1 30	8 50
21	5 11	25 12	2 55	18 10	0 12	0 27	9 12	17 10	0 22	North.	1 31	8 56
26	5 45	25 39	2 49	16 29	0 25	North.	9 14	16 59	0 24	0 13	1 32	9 1

Hark! how Delight
Knocks with her silver wings at every sense,
For merry May her pastimes doth commence.
Hark! how the peasants, with their music loud,
Raise many an ancient ditty; while a crowd
Of snow-clad maidens, crowned with garlands gay,
Are tripping lightly round the Queen of May.—*Cleveland's May Day.*

One of the oldest and most poetical of all our country amusements was the celebration of May-day. Mention is made of it by our earliest chroniclers and poets; and so great is its antiquity, that the very origin is lost. Some believe that it is a custom which has descended down to us from the times of the old Druids: others, that it was introduced into England by the Romans. But, as it is not mentioned by any historians who have recorded the manners of that period, I shall leave the matter to rest where it is; for it is sufficient to know, that, four or five hundred years ago, May-day was a great holiday in England. Our forefathers were great lovers of nature, had more holidays than we have now, and had few of those in-door amusements which we possess; and I have always considered May-day as one of those joyous celebrations with which they welcomed the return of spring—the season which brought back the birds, and flowers, and long green leaves, and threw open once more, as it were, the gates which led to their summer amusements, their joyous out-of-door pastimes, which, during the long, dark winter, had been closed. It seemed but natural that they should set out on their merry pilgrimage to the woods, when the trees were again putting on their green garments; when they could, on the darkening hedges, point out the very spots where the May blossoms would be hung; when the daisies were once more strewn, like radiant pearls upon the grass; and, in deep woodland nooks, the blue-bells lay sleeping like an azure cloud that had fallen from heaven; and primroses and violets nestled side by side on the warm and sunny banks. It was then that they sallied forth, with axe in hand, to fell one of the tall, straight, tapering trees which grew in the forest, for they always brought home the most beautiful one they could meet with for their May-pole. Sometimes it was dragged from the woods by oxen garlanded with flowers, and accompanied by music; while men and maidens, bearing green boughs, swelled the procession: and thus they brought home May. Spenser, who lived in the reign of Queen Elizabeth, presents us with the following description of bringing home May, in his "Shepherd's Calender." The scene here painted he had, no doubt, often witnessed:—

Young folk now flock in everywhere,
To gather May-bushes and smelling brere,
And home they hasten, the posts to dight,
And all the church pillars, ere daylight,
With hawthorn-buds, and sweet eglantine,
And garlands of roses, and sops of wine.
Even this morning—no longer ago,
I saw a shoal of shepherds out go,
With singing, and shouting, and jolly cheer;
Before them went a lusty tabourer,
That unto many a hornpipe play'd
Whereto they danced, each one with his maid.

To see those folks making such joyance,
Made my heart after the pipe to dance.
Then to the green wood they speed them all
To fetch home May, with their musical:
And home they bring him in a royal throne,
Crowned as king; and his queen, fair one,
Was Lady Flora, on whom did attend
A fair flock of fairies, and a fresh band
Of lovely nymphs. O that I were there,
To help the ladies their May-bush to bear.

On the village green, the tall May-pole was reared, amid merry shouts and loud huzzas, and the deep sounding of music; they built up arbours out of the branches they brought from the forest; they decorated the fronts of their houses with boughs; and on the tall May-pole hung many a garland of beautiful flowers. A bower was placed at the head of these arbours, which stood higher than the others. Within and without it was decorated with flowers, and set apart for the Queen of May, who was, generally, some peasant girl, selected by the unanimous consent of her companions. Sometimes the daughter of the Lord of the Manor presided as May Queen, and the whole family issued from their old ancestral hall to join in the May-day games. Then there were rustic youths dressed up in the costume of Robin Hood and his merry men, and Maid Marian; recalling the days of old, when these daring outlaws were the dread and pride of Sherwood Forest, plundering the rich to feed the poor; and chasing the dun deer through the thickets, in spite of Norman keepers and cruel forest-laws.

It was a season of rejoicing throughout the length and breadth of the land. Nor was London a bit behind in the celebration of this ancient festival. Even in the City, the tall May-pole was erected; and any one who had passed along Cornhill on May-day a few centuries ago, would have seen green arbours erected there, and huge oaken boughs hanging over the street, and the milk-maids, and all the merry old citizens, with their wives, daughters, maids, and apprentices, congregated about the May-pole, many of them dressed in old fanciful costumes, and giving themselves up to all the fun and jollity of May. But time has not preserved even the names of the many measures which they danced; and nearly all we know of the ancient pipe and tabor, the favourite music to which they timed their footsteps, is gathered from glancing at some scarce engraving. "Gone are the days of Gamelyn." "The May-pole," says an old writer, "was consecrated to the Goddess of Flowers, and the garlands were left upon it the whole year, without being disturbed by any one;" and I well remember passing through a village, at the end of April, in which a tall May-pole stood, only a few years ago, and seeing the last year's garlands hanging upon it, all wan and withered, and beaten by the storms of the past winter.

In those times, it seems to have been a custom to set out for the woods soon after midnight, so that by sunrise the May-pole was felled, and the branches gathered, and the procession ready to start, on its way home. In a book written during the reign of Queen Elizabeth, it is stated that sometimes as many as forty yoke of oxen, each having a sweet nosegay tied to the tip of his horns, were employed to draw home the May-pole; that they covered it all over, from top to bottom, with flowers and sweet herbs, which they bound round with strings; fastening, at equal distances, cross bars upon it, to the end of which they attached garlands; and thus decorated, it was hoisted up, amid the leaping and dancing and joyous shouts of the assembled multitude.

A sum of money was allowed in those days for the erection of green arbours around the May-pole. The King and Queen, or Lord and Lady of May, as they were called, were dressed out in scarfs and ribbons, and plumes of feathers, and made as fine as it was possible to array them.

Henry the Eighth, one morning in May, attended by several of his nobles, dressed in the quaint costume of Robin Hood and his merry men, suddenly entered the chamber where the Queen and her ladies were seated, much to the alarm of the latter, who were thus taken by surprise; for it appears that the King and his followers were armed with bows and arrows, and swords and bucklers, like the outlaws of old; and fine screaming there was, no doubt, amongst the Queen and her ladies, when their apartment was broken into by a troop of armed men; who, however, instead of carrying them off, like the ancient free-booters of the forest, and keeping them prisoners under the greenwood tree until they paid down a handsome ransom in gold, contented themselves by performing several wild woodland dances, then taking their departure.

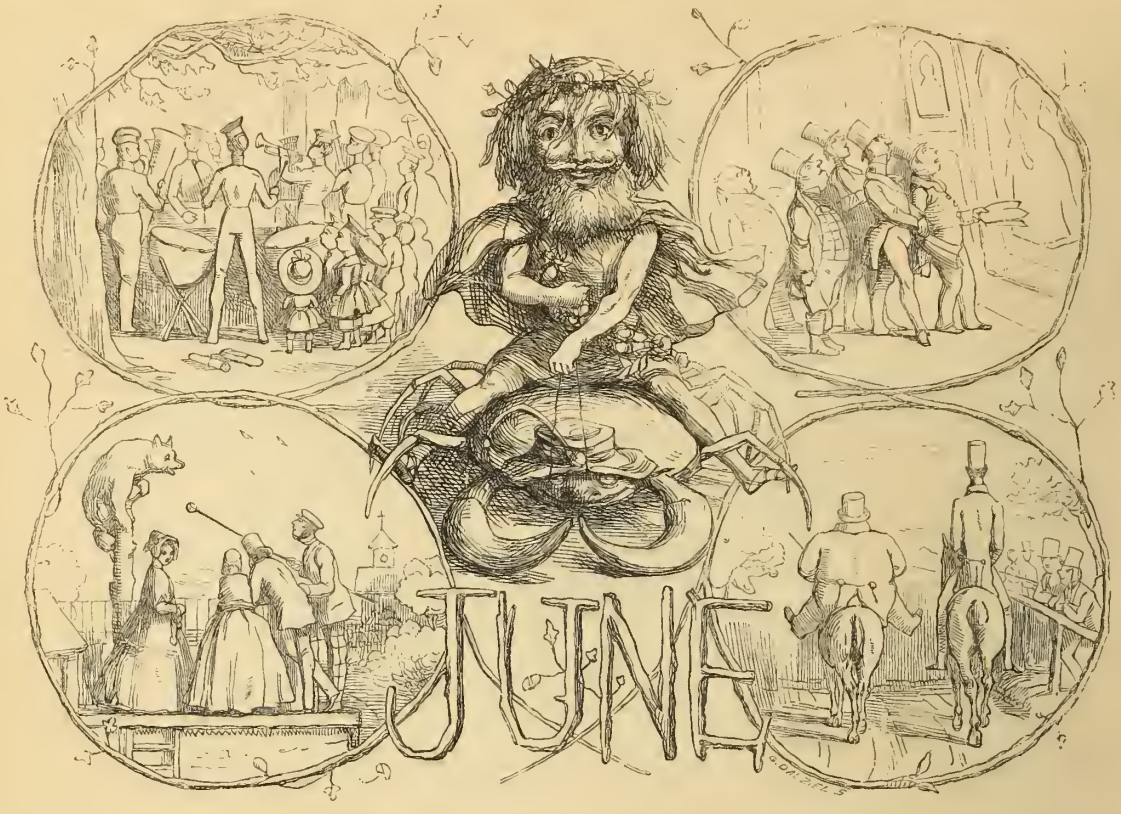
The same Monarch, also, once rode out with his Queen and a whole concourse of nobles, one fine May morning, to the top of Shooters-hill, above Greenwich, and there they were received by a large troop of men, amounting to about two hundred, who were all dressed as foresters, in a costume of Kendal green, and headed by a captain, whom they called Robin Hood. These May-day foresters, dressed up for the occasion, amused their Royal and noble visitors by showing them their skill in archery; and when this was over each blew his bugle-horn, and conducted the King and his train into a wood under the brow of the hill, where a large arbour was erected of green boughs, consisting of a hall and two chambers, all decorated with flowers and sweet herbs; and here a mighty feast stood ready prepared, quite in keeping with the scene, consisting of venison, venison-pasties, and a copious supply of the blood-red wine, for such, the old ballads say, often formed the forest-banquet of Robin Hood and his merry men. A joyous May-day must that have been, presided over by the King and Queen of England; for Henry the Eighth was then a young man, greatly beloved by his people; and in the laughing merry Monarch who presided over that woodland repast, who drank deep healths to the Lord and Lady of May, and was the foremost to lead off the joyous dance in that summer hall, roofed over with green branches,—few would have traced the future murderer, or read in the outlines of the then jocund Monarch the cruel beheader of so many of his wives. For the Royal tiger seemed then as harmless and playful as a lamb; and those who were around him but little dreamed that his memory ever after, throughout all time, would be preserved in one of the darkest stains that ever fell, and lay an eternal blot upon the pages of history.

On their return from this woodland banquet, they were met by two ladies, richly attired, who rode in a beautiful chariot, drawn by five horses; and on the back of each horse was also seated a lady, one of whom was called the Lady of Showers; another, the Lady of Green; the third, the Lady of Vegetation; the fourth, of Pleasure; and the fifth, of Sweet Odour. Of the two who occupied the chariot, one was called the Lady of May, and the other the Lady of Flowers: and they entertained the assembled company with songs, as they returned to Greenwich. Such was an English May-day in the reign of Henry VIII.

But few works are fraught with more amusement than our old English treatises on angling: there is such a simple cunningness about these honest old fishermen, that it is difficult to refrain from laughter while perusing the most serious passages. You almost fancy that many of these quaint writers must have had certain prayers, which they ever and anon repeated while following so peaceful an occupation—brief pious sentences, offered up in the full simplicity of the heart while dropping in the line, over a bite, or when the finny prey was landed. In one book the angler is recommended "to be full of humble thoughts, when occasion offers; to kneel, to down, or wet his feet and hands, as often as there is any advantage to be gained thereby:" nor is he to mind "a little dirty water or mud," if he can get anything out of it. He is also advised to render himself skilful in music, so that whenever his spirits are melancholy, or his thoughts heavy, "he may remove the same with some godly hymn or anthem, of which David gives many examples." Again, he is to be strong and valiant, not to be amazed at storms, nor frightened at thunder. Nor must he, "like the fox which preyeth upon the lambs, employ all his labour and cunning on the smaller fry; but, like the lion that seizeth elephants, think the greatest fish that swims a reward little enough for the pains he endures." He must also "be patient, not feel vexed when he loses his prey, although it is almost in his hand." Neither must he swear: and we still retain the old saying, "those who swear will catch no fish;" besides it would hardly have been the thing to have ripped out a thundering oath, after having chaunted some "godly hymn or anthem." The angler also ought to be "a scholar and a good grammarian," as, no doubt, the fish being an ancient people, and from the earliest ages acquainted with respectable society, must have felt bad grammar grate again upon their ruddy gills. Further, he must have sweetness of speech, to entice others to follow his art; have also a knowledge of the sun, moon, and stars; be conversant with wind and weather; and have a constant and settled belief that where "the waters are pleasant and anything likely, there the Creator of all good things hath stored up much of his plenty." How religiously did these old rascals set about a little quiet murder! thanking Heaven when they succeeded, and, as Cromwell said, "had good execution"

But we must not forget the business on hand, which is to continue our remarks on angling from April; and these must necessarily be brief. From early spring, until the close of autumn, perch angling is pursued; they are very fond of lingering in shadowy places, as bridges, old mill-dams, and flood-gates, and such like quiet spots, where they readily take the bait. The perch is a beautifully marked fish; the back and a portion of the sides are of dark green, varied with black, while the belly is white and red. In form it is deep, arched, and has a large mouth, with rich golden irides. It will bite greedily at a worm.

As there are so many kinds of trout, I must confine myself to the common one, which is generally from twelve to fifteen inches in length, is of a dirty yellow colour, brownish on the back, and spotted. Early in spring the trout will take a ground bait, for which nothing can be better than a worm. Fly-fishing for trout would occupy the whole space we dedicate to the description of the month, so we must pass it by. Remember, in fishing for trout, to keep out of sight; once throw your shadow upon the water, and away the shy visitor goes. As soon as you have landed a trout, kill it—a sharp blow on the head is pretty sure to finish it; and this is better than leaving it to pant on the grass, or gasp in your fishing basket, to say nothing of the richness added to its flavour. The grayling is fond of clear, rapid streams, especially such as flow through hilly countries. It is rather less than the trout, beautifully formed; the head small; the eyes prominent, and circled with silver; the teeth very small; the head a dusky colour, and the gills a bright green, which in time become dark. The back is of a greenish blue tinge; the sides of the richest silvery grey, though when first caught glittering in the sunlight like gold, and almost gaudy, through the rich dark irregular spots which dot the shifting silver. It is a rapid swimmer, and is lost to the eye in a moment. When full-grown, it is about fifteen or sixteen inches in length; and although taken all the year round, is not considered in season until September, and from then to February or the middle of spring. At the latter season, they will take almost any bait used in bottom fishing, such as worms, gentles, grubs; nor are they at all particular, if they have had a narrow escape from the hook, of attacking the bait again, even with a torn jaw. The tackle ought to be fine. The flesh is very white, and the flavour highly prized. "No life," says Walton, "is so happy and so pleasant as the life of a well-governed angler: for when the lawyer is swallowed up with business, and the statesman is preventing or contriving plots, then we sit on cowslip banks, hear the birds sing, and possess ourselves in as much quietness as the silent silver streams which we see glide so smoothly by us."



M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises	SUN. Souths. Before 12 o'clock.	SUN. Souths. Height above horizon	SUN. Sets	MOON. Rises. Afternoon	MOON. Souths. Afternoon.	MOON. Souths. Height above horizon	MOON. Sets Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	F	*Nicomede*	3 51	2 31	60½	8 4	3 25	9 3	30¾	2 9		10		10 50	11 20	152
2	S	Antares souths at 11h. 31m. P.M.	3 50	2 22	60¼	8 5	4 28	9 47	27¼	2 32		11		11 55	No Tide.	153
3	S	TRIN. SUNDAY	3 50	2 13	60¾	8 6	5 33	10 32	24	2 57		12		0 15	0 40	154
4	M	Spica Virginis souths at 8h. 24m. P.M.	3 49	2 3	61	8 7	6 22	11 17	21½	3 25		13		1 2	1 25	155
5	Tu	*St. Boniface*	3 49	1 53	61	8 8	7 31	Morning	19½	3 57		●		1 45	2 0	156
6	W	Eta Boötis souths at 8h. 46m. P.M.	3 48	1 42	61¼	8 9	8 25	0 4	18¼	4 34		15		2 20	2 40	157
7	Th	*Corpus Christi*	3 47	1 31	61¼	8 10	9 16	0 51	18½	5 16		16		2 55	3 10	158
8	F	Arcturus souths at 8h. 59m. P.M.	3 47	1 20	61½	8 11	9 59	1 39	19¼	6 3		17		3 30	3 45	159
9	S	Epsilon Boötis souths at 9h. 25m P.M.	3 46	1 9	61¾	8 12	10 38	2 26	21	6 56		18		4 0	4 20	160
10	S	1ST S. aft. TRIN.	3 46	0 57	61¾	8 12	11 11	3 14	23½	7 55		19		4 35	4 55	161
11	M	*St. Barnabas*	3 45	0 45	61¾	8 13	11 40	4 1	26¾	8 57		20		5 10	5 30	162
12	Tu	Trin. Term ends	3 45	0 33	61¾	8 14	Morning	4 48	30½	10 4		21		5 50	6 10	163
13	W	Beta Libræ souths at 9h 39m. P.M.	3 45	0 21	61¾	8 15	0 8	5 35	34¾	11 12		☾		6 40	7 0	164
14	Th	Battle of Saragossa, 1809	3 45	0 8	61¾	8 16	0 33	6 22	39¼	Afternoon		23		7 30	8 0	165
15	F	Alpha Serpentis souths at 9h. 59m. P.M.	3 44	After 12 o'clock.	61¾	8 16	0 57	7 11	44	1 36		24		8 30	9 10	166
16	S	Antares souths at 10h. 39m P.M.	3 44	0 17	62	8 16	1 27	8 2	48¼	2 52		25		9 40	10 15	167
17	S	2ND S. aft. TRIN.	3 44	0 30	62	8 16	1 55	8 56	52¼	4 10		26		10 45	11 15	168
18	M	B. Waterloo, 1815	3 44	0 43	62	8 17	2 30	9 53	55	5 29		27		11 45	No Tide.	169
19	Tu	Alpha Herculis souths at 11h. 16m. P.M.	3 44	0 56	62	8 18	3 10	10 53	56½	6 45		28		0 15	0 45	170
20	W	Acces. Queen Vic.	3 44	1 9	62	8 18	3 59	11 55	—	7 55		○		1 10	1 37	171
21	Th	Proclamation	3 44	1 22	62	8 18	4 58	Afternoon	56¾	8 53		1		2 2	2 30	172
22	F	Civil war in Paris,	3 45	1 35	62	8 19	6 8	2 0	55¼	9 45		2		2 55	3 22	173
23	S	and Paris in a state of siege, 1848	3 45	1 48	62	8 19	7 20	2 58	52¾	10 25		3		3 45	4 10	174
24	S	3RD S. aft. TRIN.	3 45	2 1	62	8 19	8 34	3 52	49¼	10 59		4		4 35	5 0	175
25	M	Alpha Ophiuchi souths at 11h. 11m. P.M.	3 46	2 14	62	8 18	9 48	4 43	45	11 26		5		5 20	5 50	176
26	Tu	Geo. IV. d., 1830	3 46	2 27	62	8 18	10 58	5 31	40¾	11 51		6		6 10	6 35	177
27	W	Gamma Draconis souths at 11h. 29m. P.M.	3 46	2 39	61¾	8 18	Afternoon	6 17	36½	Morning		☽		7 3	7 30	178
28	Th	Q. Vic. cro. 1838	3 47	2 52	61¾	8 18	1 15	7 1	32¼	0 14		8		8 0	8 30	179
29	F	*St. Peter's Day*	3 48	3 4	61¾	8 18	2 10	7 45	28½	0 38		9		9 0	9 35	180
30	S	Alpha Lyræ souths at 11h. 55m. P.M.	3 49	3 16	61¾	8 18	3 24	8 30	25¼	1 2		10		10 5	10 30	181

JUNE.

The Sun is in the sign Gemini till the 21st, on which day, at 2h. 8m. P.M., he enters the sign Cancer (the Crab), and Summer commences. On the 1st day he is 96,378,000 miles from the Earth. He rises on the 1st, at 1° N. of N.E. by N.; on the 13th, at 3°½; on the 22nd at 4°; and on the 31st, at 3°¾ N. of the same point of the horizon. He sets, on the same days, at 1°¾; at 3°¼; at 4°; at 3°½ N. of N.W. by N. points of the horizon. His times of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The Moon is in the constellation Virgo on the 1st and 2nd; in Libra, on the 3rd and 4th; in Ophiuchus, on the 5th and 6th; skirting both Aquila and Sagittarius, from the 7th to the 9th; in Capricornus, on the 10th; in Aquarius, on the 11th and 12th; in Pisces, on the 13th and 14th; in Cetus and Pisces alternately, till the 17th; in Taurus, from the 18th to the 20th; in Gemini, on the 21st and 22nd; in Cancer, on the 23rd; in Leo, from the 24th to the 26th; in Virgo, till the 29th; and in Libra, on the 30th.

She rises before the Sun sets, till the 5th; during the night, till the 15th; and after the Sun rises, till the 20th. She sets before the sun rises, till the 4th; during the day, till the 20th; and after sunset, from the 21st. For the actual time, see the opposite page. She is on the Equator on the 14th and on the 27th. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Saturn on the 14th; Mars and Uranus, on the 15th; Venus, on the 17th; Mercury, on the 21st; and Jupiter, on the 24th.

She is full on the 5th, and new on the 20th; but without an Eclipse at both times.

Mercury is in the constellation Gemini throughout the month.

He is an evening star till the 25th; and sets on the 1st, at 2h. 5m.; on the 5th, at 1h. 58m.; on the 10th, at 1h. 39m.; on the 15th, at 1h. 12m.; on the 20th, at 40m.; and on the 25th, at 5m. after the sun sets. He is very favourably situated for observation at the beginning of this month. He sets on the 1st, at 6°¾ N. of N.W. by N.; on the 18th, at N.W. by N.; and on the last day, at 7°½ N. of W.N.W. He is moving eastward among the stars from the 1st to the 15th; he is stationary on the 16th and 17th; and is moving westward from the 18th to the 30th. He is near the Moon on the 21st. On the 3rd he is at his greatest east elongation; and on the 30th is in inferior conjunction with the Sun. His motion among the stars, and his relative position to the principal stars near him, are shown in the annexed cut.

PATH OF MERCURY AMONG THE STARS, DURING THE MONTH OF JUNE, 1849.

Scale, 12 degrees to one inch.

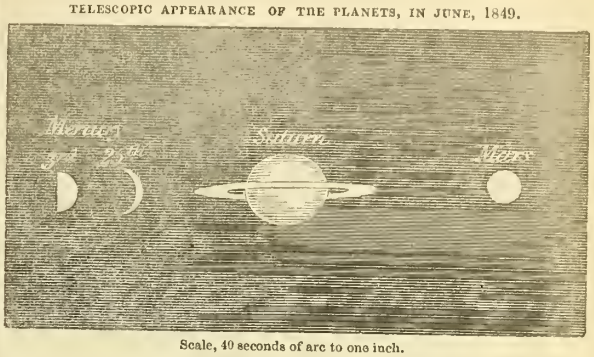
Venus is in the constellation Aries till the 21st; and in that of Taurus from the 22nd.

She is a morning star throughout the month; and rises on the 1st, at 2h. 44m. A.M.; on the 17th, at 2h. 3m. A.M.; and on the 30th, at 1h. 34m. A.M.; at the E.N.E. on the 9th; and 2° N. of E.N.E. on the 30th. She is stationary among the stars on the 1st and 2nd; and is moving eastward among them from the 3rd to the 30th. She is near the Moon on the 17th; is at the greatest brilliancy on the 18th; and in aphelion on the 30th.

Mars is in the constellation Cetus till the 5th; in that of Pisces, from the 6th to the 22nd; in Cetus again, till the 28th; and in Aries, from the 29th.

He is a morning star; and rises on the 1st, at 1h. 44m. A.M., at 4°¾ N. of E.; on the 16th, at 1h. 4m. A.M., at E. by N.; and on the 30th, at 0h. 28m. A.M., at 6° N. of E. by N. His times of southing are given below; and he sets at about 2½h. P.M. He is moving eastward among the stars; is near the Moon on the 15th, at midnight, and Uranus on the 21st.

TELESCOPIC APPEARANCE OF THE PLANETS, IN JUNE, 1849.



Scale, 40 seconds of arc to one inch.

Jupiter is in the constellation Leo throughout the month.

He is an evening star; rises between 7h. and 9h. A.M.; souths at an altitude of 55°¼ on the 1st, decreasing to 53°¾ on the last day; and sets on the 1st, at 0h. 9m. A.M., at 4°½ N. of W.N.W.; and on the last day, at 10h. 26m. A.M., at 2° N. of W.N.W. He is moving eastward among the stars; and is near the Moon on the 24th.

On looking at Jupiter through the telescope, four little stars are also seen, which follow him in his orbit as the Moon follows the Earth. They are distinguished from one another by the denomination of *first*, *second*, *third*, and *fourth*, according to their relative distances from the planet: the *first* being that which is the nearest to him; and the *fourth* being that which is the most distant Their apparent motion is like that of a pendulum, passing from their greatest elongation on one side, to their greatest elongation on the other. As these satellites move round Jupiter, Eclipses of them frequently happen, particularly of the 1st and 2nd, more rarely of the 3rd, and occasionally only of the 4th, on account of its distance from the planet causing it, sometimes, to pass above or below the shadow. Their relative frequency will be seen at the bottom of every page, as the times of their occurrence are noticed in every month. They are easily seen through a telescope, when Jupiter is at a sufficient distance from the Sun; but the same satellite disappears and re-appears at different distances from the planet, which distance depends on the relative situations of the Sun, Jupiter, and the Earth; but they always happen on that side of Jupiter where the shadow of the planet is known to be. Whilst Jupiter is passing from his conjunction to his opposition to the Sun, the immersions of the 1st and 2nd satellites only are visible; and whilst he passes from his opposition to his conjunction, the emersions only are visible. Sometimes the 3rd and 4th disappear, and then re-appear on the same side of the planet; and the time elapsed between these phenomena is exactly that which it is known the satellite would be in passing a distance equal to the planet's shadow. At the time of opposition, the Planet, the Earth, and the Sun are in the same straight line, and therefore the shadow of Jupiter is in the same line, and the Eclipses take place when the satellites are close to the planet. These circumstances will be best understood by reference to the diagram in the month of February.

Jupiter's Satellites.—An Emersion of the 2nd alone is visible. It appears at about two-thirds of the diameter of the Planet, to the right as seen through a non-inverting telescope, and to the left as seen through an inverting telescope.

Saturn is in the constellation Cetus throughout the month.

He is a morning star; and rises on the 1st, at 1h. 41m. A.M.; on the 15th, at 0h. 48m. A.M.; and on the 30th, at 11h. 50m. P.M., at a little N. of E. on every day. He moves very slowly eastward among the stars till the 15th, and is stationary among them during the remainder of the month. He is near the Moon on the 14th and 15th.

Uranus rises about 4° N. of E. by N.; on the 1st, at 2h. 3m. A.M.; and on the last day, at 0h. 11m. A.M.. He is moving slowly eastward among the stars; is near the Moon on the 16th, and Mars on the 21st.

ON PLANETARY PHENOMENA.

The annual revolution of the Earth in its orbit about the Sun produces a change in the aspect of the heavens from time to time. By a little attention, it will be seen that the stars which are situated in the east during the evening, appear to be higher each successive evening, as viewed at the same time. This

(*Continued in July.*)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury.	Venus.	Mars.	Jupiter.	Saturn.
	Afternoon	Morning.	Morning.	Afternoon	Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.
1	1 40	10 7	8 3	4 37	7 47
6	1 41	9 49	7 57	4 21	7 29
11	1 34	9 34	7 51	4 4	7 10
16	1 19	9 22	7 45	3 48	6 52
21	0 56	9 13	7 39	3 31	6 33
26	0 27	9 5	7 32	3 15	6 14
30	At noon.	9 1	7 27	3 2	5 59

JUPITER'S SATELLITES.

Eclipses of 1st. Sat.	Eclipses of 2nd Sat. Emersion.
Are not visible.	D. H. M. 10 10 32 P.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
h^1 Aquarii	6	13 2 57 A.M.	Bright
		13 3 15 A.M.	Dark
Nu Piscium	5	16 3 48 A.M.	Bright
		16 4 47 A.M.	Dark
38 Virginis	6	27 10 0 P.M.	Dark
		27 10 45 P.M.	Bright

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

					Days of the Month
Full Moon ..	..	5D.	10H.	27M. P.M.	1
Last Quarter	..	13	10	24 P.M.	6
New Moon ..	..	20	2	19 P.M.	11
First Quarter	..	27	10	44 A.M.	16
Apogee ..	..	6	3	0 A.M.	21
Perigee ..	..	20	5	0 A.M.	26

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month	Mercury. Right Ascension	Mercury. Declination North.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	6h. 19m	25° 11′	2h. 46m	15° 0′	0h. 42m	2° 47′	9h. 18m	16° 44′	0h. 26m	0° 23′	1h. 33m	9° 7′
6	6 40	24 14	2 48	14 15	0 56	4 13	9 20	16 30	0 27	0 30	1 34	9 11
11	6 53	22 58	2 53	13 56	1 9	5 38	9 23	16 16	0 28	0 37	1 35	9 15
16	6 58	21 35	3 0	13 59	1 23	7 2	9 27	16 1	0 30	0 42	1 35	9 19
21	6 54	20 17	3 11	14 19	1 37	8 22	9 30	15 44	0 30	0 47	1 36	9 23
26	6 45	19 15	3 23	14 53	1 50	9 41	9 33	15 27	0 31	0 51	1 37	9 26

JUNE.—WHITSUNTIDE PROCESSIONS.

When the merry bells ring round,
And the jocund rebecks sound,
To many a youth and many a maid
Dancing in the chequer'd shade,
And young and old come forth to play
On a sunshine holiday —MILTON.

WHETHER Whitsuntide falls in May or June, it is always a season of great festivity; and, since so many old customs are dying away, we may consider it our greatest English holiday. In the country, nearly every club has its procession and feast at Whitsuntide; and almost every village and town is sounding with music; and in some large places half a dozen clubs may be seen marching to church, each with its band and banners, and every member in his holiday attire. We, who are dabblers in old black-letter lore, look upon these benevolent and useful institutions with great interest, knowing that such clubs or guilds, existed in England a thousand years ago—that the Saxons had their sick and burial societies, and that every brother who did not attend a funeral was then fined as now. According to these old Saxon laws, when a member died he was to be buried wherever he had desired; and, if any brother neglected to attend, he was fined a measure of honey: the club was to furnish half the refreshments consumed at the funeral, and each member was to pay twopence—a large sum, considering the value of money in those days, when a sheep could be purchased for a shilling, an ox for six, and four hens for sixpence. It is this very antiquity which renders these benefit societies so interesting in our eyes; and as we know that they had their merry meetings as well as their "funeral marches," we never look upon them as they go "sounding through the town," without thinking that, above a thousand years ago, similar processions passed along the ancient streets of Saxon England.

Oh! what a jingling of bells is there on the morning of Whit-Monday. What a running to and fro from house to house—for the women have in many places their clubs as well as the men, and they are probably all going in procession to the same church. Nanny runs in to ask Betty how she looks in this or that; if her new gown "sits" nicely, or she should trim her cap with blue or pink; for it must be understood that no bonnets are allowed in the procession; if it rains, umbrellas may be carried. We shall commence with the ladies first. White dresses are, of course, prevalent, though they are agreeably relieved here and there with a gown or two of gaudy colours. The ladies who hold office walk behind the band, each carrying a neat white wand, adorned with ribbons and flowers; every fair member also bears a beautiful posy; you almost wonder where so many flowers could be gathered; but what they carry with them is nothing compared to the quantity which decorate the club-room in which they

will take tea in the afternoon. Gravely, stately, and good-humouredly do they proceed along, the single ones looking down as if ashamed, and seldom venturing to raise their eyes if passing by a house they are in the habit of visiting. Not so with the married women. They are on the look-out to acknowledge everybody they know; and at every recognition there is such a waving of handkerchiefs that you might almost fancy they were about to proceed on a very long journey, and were bidding farewell to their acquaintance. But the most amusing part is the children. They are stationed on every step or little eminence, the bigger brother or sister holding a lesser one in arms, and looking out eagerly for mother. The mother is all to them, and she also is watching as anxiously. At last you hear the little voices exclaim, "Here she comes!" "There she is!" "That's *her!*" and she is sure to rush out of the ranks to give them something out of her pocket; and no end of kisses, with numberless admonitions to take care of themselves, and so on. And many a turn of the head will she give before she is out of sight. Among such processions as these we have seen faces and forms that would have arrested the eyes of both painter and sculptor, and shown them that the beautiful belongs not alone to either antiquity or Greece. We have also seen the hair arranged in such a chaste style, and so gracefully adorned with natural flowers, that many a haughty heiress would have been proud to have risen with her ringlets so arranged from the hands of a fashionable tiring-woman.

> Their overpowering presence made you feel
> It would not be idolatry to kneel.

Bnt, bang, hang! tirra, tirra! here they come—the "United Brothers." The blacksmith who heats the big drum will assuredly drive the ends in; he wields the drumsticks as if he had got a sledge-hammer in each hand, and the anvil before him. Oh! what a banner—it takes four men to support it, and two others to keep it steady by holding the tasselled strings. It was painted by Paul, the house-painter; and he has been much prouder ever since he did it. It would hardly be admissible into the British Institution—but let that pass; were any one to venture to criticise the performance, he would be indignantly told that it cost above twenty pounds. Although the tailor is a little out of both time and tune, yet he blows lustily at the clarionet; and tho young butcher is not to he found fault with, considering he has only practised on the bugle for about twelve months. What a jolly fellow that is who shakes the cymbals—his very eyes laugh again; what a clashing he makes; he cares nothing about time; "Make yourself heard, neighbour," is his answer. You can tell from his looks that he has already been busy with the ale-cup, and that he is not the only one. And those are the stewards. "Deary me!" exclaim the women, "who ever would think that was Trippet, the tripe-seller; or the other, Johnny Lee, who goes round repairing umbrellas?" but they are though; and are resolved to let you see what they can do when they choose: a nod from either of them is something to he thought of today, I can tell you; for they are the stewards, and were elected for the first time at the last meeting. Next club-feast-day two others will march, with the same stateliness, in their places. When Trippet and Lee have served their twelvemonth, should they live fifty years after, everything they can remember will be recalled either as having transpired so many years before or after they were the stewards.

Bang, bang! All the windows are up; the whole street is crowded; women with children in their arms, and boys and girls, close in and follow the procession: the men walk two and two—there is about a yard's space between each couple. What a length the procession reaches! There are at least one hundred members "strong;" and the latter word is pronounced with something like an emphasis. True enough, they march oddly: a few are very careful, but these, no doubt, are younger members; the old United Brothers seem to jog along "cheek by jowl" anyhow as they can—they look as if they were used to it; they wear their honours without blushing, some, you see, with a flower held between the lips. This is very common in the country; every one has a posy in the button-hole of his coat, for that is in accordance with club orders. Now they near the church; they will never be able to get that large banner within the porch—but they have: it required great care; and there will be a good deal of talk about after how the wind caught it at this corner, and how they staggered at that, and you would go away with an idea that a man must be to the "manner born" before he is ever able to bear a banner.

The clergyman invariably preaches a sermon, in which the words unity, brotherhood, good-fellowship, charity, duty, &c., occur a great many times. He also dines with the club, a sure guarantee that for some time after the cloth is removed good order will be maintained. There are two old club mates who have sat together at the dinner for years, and have always introduced the same argument. One maintains that "Whatever is is Right;" the other takes the opposite side, and argues that, if it is so, "then Murder is Right." They always have a little knot of listeners, and are thought rather clever. The clergyman has, on one or two occasions, entered the field; but now he seems to he weary of it, and if appealed to admits "that much may be said on both sides." The dinner we pass over; the health of the retiring stewards is of course drunk, then Trippet and Lee have to say a few words; and if it is late in the evening a few of the brothers are sure to get rather boisterous, and to cry out "Go it Lee!" or Trippet. Some of their wives also occasionally drop in at the close of the day.

Summer has now thrown open her green doors; the whole landscape is richly hung with the most beautiful foliage; the fields are ankle deep in flowers, and the earth will never look more lovely than now. Nature everywhere holds high jubilee; bird and bee and brook have each found a voice, and all day long are calling to and answering each other. Beautiful are the mornings and evenings of June, when the dew hangs upon the blossoms, and all that sweet aroma, which the hot sun will exhale, floats about the earth. Thomson, in his "Castle of Indolence," has beautifully described the luxury of green fields at this season:—

> Was nought around but images of rest—
> Sleep-soothing groves, and quiet lawns between,
> And flowery beds that slumberous influence cast,
> From poppies breathed; and beds of pleasant green,
> Where never yet was creeping creature seen.
> Meantime unnumber'd glittering streamlets play'd,
> And hurled everywhere their waters sheen,
> That as they bicker'd through the sunny glade,
> Though restless, still themselves a lulling murmur made.
>
> Join'd to the prattle of the purling rills,
> Were heard the lowing herds along the vale,
> And flocks loud-bleating from the distant hills,
> And vacant shepherds piping in the dale;
> And now and then sweet Philomel would wail,
> Or stock-doves plain amid the forest deep,
> That drowsy rustled to the sighing gale;
> And still a coil the grasshopper did keep;
> Yet all these mingled sounds inclined to sleep.

A wanderer in the country not only finds pleasure in the beauties of Nature, but feels a delight in witnessing the enjoyment of others, and in none more than seeing the children of the poor—those who have about them the stamp of City-courts and crowded alleys—running for once free and happy along the green lanes and over the pleasant field-paths. It makes a kind-hearted man sigh to think how those little creatures, ordained naturally to be happy, are shut up in stifling rooms, or left to wander at will through the hot and suffocating streets, in too many instances without any one to care either for their moral or bodily wants. Such have we sometimes had around us for the distance of a mile or two. They were rummaging every bank, peeping into every hedge, and plucking every flower they came near; they seemed to run over as much ground as a dog: they were never still—but here, there, and everywhere; ever discovering some object, new and wonderful to them, such as they had never before beheld in their City alleys; a molehill prettily marked, or a little clump of moss, were marvels in their eyes. Then, what a long consultation would there be at the door of some road-side ale-house. They perhaps mustered three or four pence amongst the whole half-dozen; the hungriest were advocates for all penny-loaves—the extravagant for a pennyworth of cheese. What a half-bashful joy played about their little dirty faces, if any good-natured pedestrian stepped in, and, by contributing a few halfpence, settled the dispute, and for once allowed them to revel in (to them) a rich banquet of bread and cheese. City-bred although they were, there would be a look of mingled gratitude and delight, which proclaimed, in unmistakeable though silent language, that those young hearts were not yet wholly corrupted, but that there lay the soil which might he made either to bear poisonous weeds or goodly fruit. In a City street their very language might perhaps shock the stranger; but here they are often met with in their best and gentlest moods. We have somewhere said—though we cannot now lay our hands upon the passage—that God still adorns the earth with trees and flowers as beautiful as ever waved in Eden, as if to prove to man, that however low he may have fallen, the lovely objects of field and wood have not degenerated; but that the rose is still as sweet, and the leaves as beautiful and green, as they were before man offended his Maker. All remains as lovely as when first fashioned by the great Creator. Nothing ever pained us more than the great sweeping Enclosure Act. It seemed as if the last link was severed that united man to the wonderful works of God—that he was no longer to "*consider the lilies of the field how they grow.*"

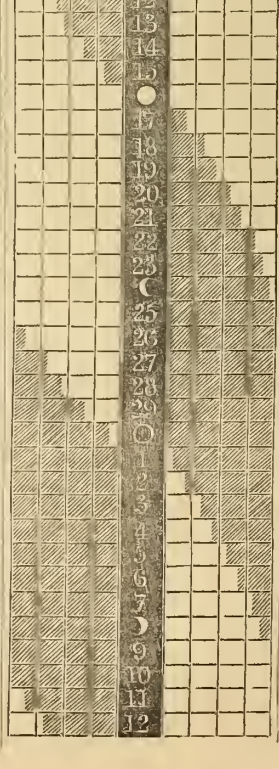
There is a rural scene which somehow seems to linger upon our memory more than any other. We can recal it any time, from the trees that overhang the footpath and throw their shadows into the water, to the very bend the river makes as it goes broadening out between the meadows, or circles like a belt of silver around the foot of the hills, until it diminishes like a bright cloud in the distance. We have often described it as seen in the early morning, or in the golden noon of day, and when the blue twilight has thrown over it a shadowy veil. Here sheep bleat, and jingle their musical bells as they crop the wild thyme from the bee-haunted hillocks, or browse amongst the luxuriant clover in the neighbouring pastures: knee-deep the plump-sided oxen graze, or, chewing the cud, lie buried among the flowers of summer. The heavy waggon goes slowly rumbling up the steep acclivity, on the summit of which stands the old weather-beaten mill, through whose rent sails we can see patches of the bright sky behind. On every hand figures are crossing the landscape. We see the angler with his wicker basket borne on the end of his folded rod, which rests upon his shoulder. We see figures moving every way.

> They come from still green nooks—woods old and hoary,
> The silent work of many a summer night,
> Ere those tall trees attain'd their giant glory,
> Or their proud tops did climb that cloudy height.
> They come from spot which the grey hawthorns dight,
> Where stream-kiss'd willows make a silvery shiver.

Who can ever fully express the pleasures of a country life? says an old author, with the various delights of fishing, hunting, and fowling, with guns, greyhounds, spaniels, and several sorts of nets. What refreshment it is to behold the green shades—the beauty and majesty of the tall and ancient groves; to be skilled in the planting and training of orchards, flowers, and pot-herbs; to temper and allay these harmless employments with some innocent and merry song; to ascend sometimes to the fresh and healthful hills; to descend into the bosom of the valleys, and the fragrant dewy meadows; to hear the music of birds, the murmur of bees, the falling of springs, and the pleasant discourses of the old ploughman. These are the blessings which only a countryman is ordained to, and are in vain wished for by the denizens of smoky cities; they are, indeed the "sights and sounds that give delight, but hurt not."

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Afternoon.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.	
1	S	4TH S. aft. TRIN.	3 49	3 27	61¾	8 17	4 26	9 15	23¼	1 29	182
2	M	Visit. of V. M.	3 49	3 39	61½	8 17	5 24	10 1	20¼	1 58	183
3	Tu	Dog Days begin	3 50	3 50	61½	8 16	6 20	10 48	19	2 31	184
4	W	*Trans. St. Martin*	3 51	4 0	61½	8 16	7 12	11 36	18½	3 14	185
5	Th	Arcturus souths 7h. 14m. P.M. [Camb. Term ends.	3 52	4 11	61¼	8 16	7 58	Morning	19	4 0	186
6	F	Old Midsum. D.	3 53	4 21	61¼	8 15	8 39	0 24	20¼	4 52	187
7	S	Ox. Term ends	3 54	4 31	61	8 15	9 14	1 12	22½	5 49	188
8	S	5TH S. aft. TRIN.	3 55	4 40	61	8 14	9 46	1 59	25½	6 50	189
9	M	Bourbons r. 1815	3 56	4 49	61	8 14	10 13	2 47	29	7 56	190
10	Tu	Epsilon Bootis souths 7h. 24m. P.M.	3 57	4 58	60¾	8 13	10 39	3 33	33	9 2	191
11	W	*Old St. Peter*	3 58	5 6	60¾	8 13	11 4	4 20	37½	10 12	192
12	Th	Beta Libræ souths 7h. 45m. P.M.	3 59	5 14	60½	8 12	11 29	5 7	42	11 22	193
13	F	Alpha Serpentis souths 8h. 12m. P.M.	4 0	5 22	60¼	8 11	11 56	5 56	46¼	Afternoon	194
14	S	[*St. Swithin*	4 1	5 28	60¼	8 10	Morning	6 46	50½	1 50	195
15	S	6TH S. aft. TRIN.	4 2	5 35	60	8 9	0 27	7 40	53¾	3 5	196
16	M	The Hegira, or flight of Mahomet, A.D. 622	4 3	5 41	60	8 8	1 4	8 36	56	4 21	197
17	Tu		4 4	5 46	59¾	8 7	1 47	9 36	56¾	5 32	198
18	W	[born, 1822	4 5	5 51	59½	8 6	2 40	10 38	56¼	6 37	199
19	Th	Prs. Aug. Camb.	4 6	5 56	59¼	8 5	3 43	11 40	—	7 31	200
20	F	*St. Margaret*	4 8	6 0	59¼	8 4	4 43	Afternoon	54¼	8 16	201
21	S	Antares souths 8h. 21m. P.M.	4 9	6 3	59	8 3	6 9	1 38	51	8 55	202
22	S	7TH S. aft. TRIN.	4 10	6 6	58¾	8 2	7 24	2 32	47	9 26	203
23	M	[*Mary Magdal.*	4 11	6 8	58½	8 0	8 39	3 23	42¾	9 53	204
24	Tu	Beta Lyræ souths 10h. 34m. P.M.	4 12	6 10	58½	7 58	9 52	4 11	38½	10 20	205
25	W	*St. James*	4 14	6 11	58¼	7 56	10 51	4 57	34	10 42	206
26	Th	*St. Anne*	4 15	6 11	58	7 54	Afternoon	5 42	30	11 6	207
27	F	Revolution in Paris, 1830, lasted three days	4 17	6 11	57¾	7 53	1 12	6 26	26½	11 32	208
28	S		4 19	6 10	57½	7 51	2 16	7 12	23½	Morning	209
29	S	8TH S. aft. TRIN.	4 21	6 9	57¼	7 50	3 15	7 57	21	0 1	210
30	M	Alpha Aquilæ souths 11h 9m. P.M.	4 23	6 7	57	7 49	4 13	8 44	19½	0 34	211
31	Tu	Alpha Lyræ souths 9h. 54m. P.M.	4 24	6 4	56¾	7 47	5 6	9 31	18½	1 12	212

DURATION OF MOONLIGHT.



HIGH WATER AT LONDON BRIDGE. Morning.		Afternoon		Day of the Year.
H.	M.	H.	M.	
11	5	11	37	182
No Tide.		0	8	183
0	32	0	55	184
1	15	1	40	185
1	55	2	15	186
2	35	2	55	187
3	10	3	30	188
3	45	4	0	199
4	20	4	35	190
4	55	5	15	191
5	35	5	55	192
6	15	6	40	193
7	5	7	30	194
7	57	8	27	195
9	5	9	37	196
10	11	10	47	197
11	22	11	55	198
No Tide.		0	30	199
0	57	1	25	200
1	52	2	20	201
2	45	3	10	202
3	35	3	55	203
4	19	4	40	204
5	0	5	25	205
5	47	6	10	206
6	30	6	55	207
7	15	7	40	208
8	5	8	35	209
9	10	9	45	210
10	18	10	55	211
11	25	At Midnight		212

JULY.

The Sun is in the sign Cancer till the 23rd, on which day, at 0h. 59m. A.M., he enters that of Leo (the Lion). On the 1st he is 96,590,000 miles from the Earth, being at his greatest distance on this day, at 4h. A.M., during the year. On the 1st he rises at 3°¼ N. of N.E. by N.; on the 18th, at the N.E. by N.; and on the 31st, at 4°¼ S. of N.E. by N. He sets, on the same days, at 3°¼ N. of N.W. by N.; at the N.W. by N.; and on the last day at 4° S. of N.W. by N. points of the horizon. His time of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The Moon is in the constellation Libra on the 1st; in Ophiuchus, on the 2nd, 3rd, and 4th till noon; moving on the boundaries of Aquila and Sagittarius, till the 6th; in Capricornus, on the 7th; in Aquarius, from the 8th to the 10th; in Pisces and Cetus alternately, till the 15th; in Taurus, on the 16th and 17th; in Gemini, on the 18th and 19th; in Cancer, on the 20th; in Leo, from the 21st to the 23rd; in Virgo, till the 26th; in Libra, on the 27th and 28th; and in Ophiuchus, till the end of the month.

She rises before the Sun sets, till the 5th; during the night, till the 19th; and after the Sun rises, till the 20th. She sets before the Sun rises, till the 4th; during the day, till the 19th; and after the Sun sets, from the 20th. For the actual times, see the opposite page.

She is on the Equator on the 12th and on the 24th. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Saturn on the 12th; Uranus, on the 13th; Mars, on the 14th; Venus, on the 16th; Mercury, on the 18th; and Jupiter, on the 21st. She is full on the 5th, and new on the 19th; but without an Eclipse at both times.

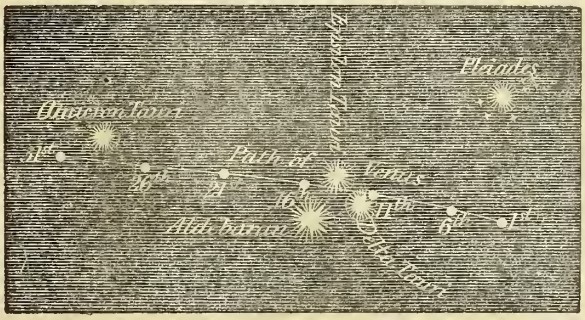
Mercury is in the constellation of Gemini throughout the month.

He is a morning star from the 5th; and rises on the 5th, at 5m.; on the 8th, at 25m.; on the 14th, at 1h. 1m.; on the 20th, at 1h. 25m.; from the 25th to the 29th, at 1h. 34m.; on the 30th, at 1h. 33m., before the sun rises. The period of time from the 14th to the end of the month is favourable for observing this planet, before sunrise. He rises at 7°¼ N. of E.N.E., on the 1st; at N.E. by N. on the 22nd; and 1° N. of N.E. by N. on the last day. He is moving westward among the stars till the 9th; is stationary among them on the 10th and 11th; and is moving eastward from the 12th to the 31st. He is near the Moon on the 18th; and at his greatest west elongation on the 21st.

Venus is in the constellation Taurus throughout the month.

She is a morning star; and rises on the 1st, at 1h. 33m. A.M.; and on the last day, at 0h. 59m. A.M., at 2°⅔ N. of E.N.E. on the 1st; and at 1°¼ S. of N.E. by N. points of the horizon on the 31st. She is moving eastward among the stars throughout the month; is near Aldebaran on the 15th; and the Moon on the 16th. On the 22nd she is at her greatest W. elongation. Her places in the heavens, relative to the principal fixed stars near her, are shown in the annexed diagram.

PATH OF VENUS, WITH RESPECT TO THE FIXED STARS, DURING THE MONTH OF JULY, 1849.



Mars is in the constellation Aries till the 27th; and in Taurus, from the 28th.

He rises on the 1st at 26 minutes after midnight; on the 11th, at midnight; and on the 31st, at 11h. 13m. P.M. He is visible throughout the night, after these times. He rises on the 1st at 6°⅔ N. of E. by N.; on the 14th, at E.N.E.; and on the 31st, at 5°½ N. of E.N.E. His times of southing are given below; and he sets at about 2½h. P.M. He is moving eastward among the stars; and is near the Moon on the 14th.

Jupiter is in the constellation Leo throughout the month.

He is an evening star; and sets on the 1st, at 10h. 23m. P.M., at 1°¾ N. of W.N.W.; on the 19th, at 9h. 19m. P.M., at W.N.W.; and on the last day, at 8h. 37m. P.M., at 1°¼ S. of W.N.W. He is moving eastward among the stars; and is near the Moon on the 21st.

Saturn is in the constellation Cetus throughout the month.

He rises on the 1st, at 11h. 46m. P.M.; on the 15th, at 10h 42m. P.M.; and on the 31st, at 9h. 49m. P.M. After these times he is visible throughout the night. He rises on every day, a little to the N. of the east part of the horizon, is nearly stationary among the stars during the month; and is near the Moon on the 12th. His place in the heavens, with respect to the principal fixed stars, is shown in the annexed diagram; during the remainder of the year, his change of place is small, and he therefore occupies nearly the same place among the fixed stars to the end of the year.

RELATIVE POSITION OF SATURN TO NEIGHBOURING STARS, DURING THE MONTH OF JULY, 1849.

Uranus rises about 4° N. of E. by N. on the 1st, at 0h. 7m. A.M.; and on the last day at 10h. 10m. P.M. He is nearly stationary among the stars; and is near the Moon on the 13th.

ON PLANETARY PHENOMENA.

(*Continued from June.*)

change of height may escape notice for a few evenings; but if continued for a month, the observer cannot fail to be convinced of the fact. The causes which operate to make the stars and the planets rise earlier every evening, operate in a similar way to make those situated in the west set earlier every succeeding evening. Those objects, therefore, which we have been accustomed to see occupy the western portion of the sky after sunset, are no longer to be found there, but their places are occupied by other objects; and thus, by the Earth moving round the Sun, all the stars successively become visible to us. Had the Earth moved about a fixed axis passing through its centre, and not in an orbit round the Sun, the aspect of the heavens, at the same time of night, would have been always the same.

In the Almanack for 1847 are given the times at which the principal stars pass the meridian before midnight in most of the months. The times that the same stars in the same months in this year pass the meridian, are one minute earlier than the times given in the Almanack for 1847; and, therefore, these times, by the application subtractively of one minute, apply during this year. The stars thus preserving their places from year to year without change, present an admirable means of showing the absolute changes in the places of the Moon and planets from period to period. These changes are perpetually progressing, and all of them are noticed from month to month, as far as is necessary to enable every reader to find any planet in the heavens, and to follow its course among the stars from year to year. Previously to the publication of this Almanack, few persons indeed had seen the Planet Mercury with the unassisted eye, which owing to his proximity to the Sun, is the most difficult to see, of all the old planets. At times, however, he may be readily seen, either in the evening or morning twilight, according as he is at his greatest eastern or western elongation. These times are carefully noted, and

(*Continued in August.*)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning	Jupiter. Afternoon	Saturn. Morning
	H M	H. M.	H. M.	H M.	H M.
1	11 54	9 0	7 26	2 59	5 55
6	11 24	8 56	7 20	2 43	5 36
11	11 0	8 53	7 14	2 27	5 17
16	10 45	8 52	7 8	2 11	4 58
21	10 40	8 51	7 1	1 56	4 38
26	10 45	8 52	6 55	1 40	4 18
31	10 59	8 53	6 49	1 24	3 58

JUPITER'S SATELLITES.

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
f Piscium	6	{ 13 0 9 A.M.	Bright
		{ 13 0 51 A.M.	Dark
A star in Ophiuchus	5	29 11 30 P.M.	Dark
		At the time of re-appearance the star below horizon.	

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	Days of the Month	
Full Moon .. .. 5d 1h. 29m.	1	P.M.
Last Quarter.. .. 13 7 8	6	A.M.
New Moon.. .. .. 19 9 15	11	P.M.
First Quarter .. 27 0 35	16	A.M.
Apogee 3 8 0	21	A.M.
Perigee 18 2 0	26	P.M.
Apogee 30 7 0		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

	Mercury		Venus.		Mars.		Jupiter.		Saturn.		Uranus.	
	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.
1	6h. 32m	18° 38′	3h. 37m	15° 36′	2h. 4m	10° 56′	9h. 37m	15° 9′	0h. 32m	0° 54′	1h. 37m	9° 29′
6	6 21	18 34	3 53	16 24	2 17	12 9	9 41	14 51	0 33	0 56	1 37	9 31
11	6 17	19 2	4 10	17 15	2 31	13 18	9 45	14 32	0 33	0 57	1 38	9 33
16	6 22	19 53	4 28	18 6	2 44	14 24	9 48	14 12	0 33	0 57	1 38	9 35
21	6 37	20 51	4 48	18 54	2 58	15 26	9 52	13 51	0 33	0 56	1 38	9 36
26	7 1	21 36	5 8	19 36	3 11	16 24	9 56	13 30	0 33	0 53	1 38	9 36

JULY.—SHEEP-SHEARING FEAST.

Since finish'd our shearing, in feasting we're met,
And our master before us this plenty has set;
While gaily and gladsome we holiday keep,
Let us give the praise due to the fleece and the sheep.—OLD SONG.

SHEEP-SHEARING Feast is one amongst the oldest of our English holidays; and appears to have ranked with the earliest celebrations of the olden times. It is frequently alluded to in the Bible, where we meet with the names of those who celebrated it; and we even find enumerated the many good things which were consumed at the feast. It is pleasant to dwell upon such ancient customs, to recal scenes which were in existence thousands of years ago, long before the shepherds assembled in the fields of Bethlehem, or the "star had arisen in the east" that illuminated a dark and benighted world. It was so natural, when mankind had gathered in the wool which was to clothe them, and the corn which was their principal food, to return thanks to the Giver of all good, and to be joyful and merry on such occasions. It is a pleasure to know, that in summer time there was the same bleating of sheep and lambs beside the brooks in the pleasant vallies of Palestine, as there is now in our own green English pastures; and that, ages ago, the shepherds washed their flocks in the hallowed waters of Jordan.

There is nothing more lively than Sheep-Shearing, where all the idlers in the village are assembled; where the crowded pens are filled with bleating sheep; while the shearers are bending as earnestly over their work as if it were a matter of life and death, though the lookers-on only consider it as a pleasant amusement. There is, also, something pleasing in the sound, as they every now and then pause to whet or sharpen their shears—in the very attitude of the clipped sheep as they turn away, as if they scarcely knew themselves, or their companions, for they all seem lost together; so strange do they appear in their ridgy jackets; for wherever the edge of the shears has clipped there is a mark which goes round and round, as if the sheep were bandaged in fine wool. Then there is something pleasing in the scenery amid which this labour takes place, in the large old barn in the background with its opening door, or the farm-yard surrounded with stacks, sheds, and out-houses, and carts, painted blue or red, on the shafts of which the fowls are perched But the most cheering sight of all to the "clippers," for such are the sheep-shearers called, is the preparation under the oak before the farm-house door, or within the barn itself, for the feast; for they not only look forward to a merry time, but there is the consciousness that their labour is brought to a close; and when the last sheep is sheared, then comes the loud huzza! for no end of good things are inviting them,

The great copper is filled with furmity, made of boiled wheat, which, when cold, cuts like jelly; currants, raisins, spices of every kind; sugar shot in in pounds, which, when boiled enough, is emptied out into basins and pans, and

cooled with new milk. Round this delicious mess assemble the young—three or four, with huge wooden spoons, eating out of one panchcon, or large earthenware vessel, about two feet wide. Sometimes, they quarrel, like pigs around a trough; one has thrown a spoonful of furmity into the others face; others have set off, and gone into the orchard to swing. The great kitchen is a very Babel of sounds.

In my "Pictures of Country Life," I have drawn the following picture of a Sheep-Shearing Feast, which is sometimes held in the barn: the immense door is turned into a table, and almost bends beneath its load of provisions. We talk of roast beef; taste what is set before them! Smell of that chine: what a nosegay! It is stuffed with all kinds of savoury herbs; it tastes like duck, goose, pork, veal, as if all good things were rolled into it, and made one. It would make a sick man well only to smell of it. What slices! What appetites! What horns of brown ale they empty! A waiter in a London eating-house would run away horror-stricken, and proclaim a coming famine throughout the land. They eat their peas by spoonfuls: a new potato vanishes at every mouthful; dishes are full and emptied ere you can turn your head. That was a whole ham ten minutes ago, now you behold only the bone. Who ever before saw such enormous plum-puddings? Surely they have eaten enough. Why, that broad-shouldered sun-burnt fellow has clapped a solid pound upon his plate—it is burning hot: look how he holds that large lump, and blows it between his teeth; the tears fairly start into his eyes. Where are those legs of mutton, the chines, and sirloins, and aitch-bones of beef? Gone, for ever gone! And now come the custards, and cheesecakes, and tarts. The men will assuredly burst. See, they loosen their neckerchiefs and their waistcoats, as if they were going to begin again in downright earnest. Every man seems as if he had brought the appetite of three, as if he were resolved to do his utmost; for "eat, drink, and spare not," is the order of the day; there is no one by to begrudge them.

The following beautiful song, which we found in a collection published nearly a century and a half ago, has, no doubt, often been carolled by many a voice, long since silent, at the old English Sheep-Shearing Feasts. We regret that we are unable to discover the Author's name, for every line is stamped with the impress of true poetry:—

Tarry wool, tarry wool,
Tarry wool is ill to spin;
Card it well, card it well,
Card it well ere ye begin.
When 'tis carded, rolled, and spun,
Then the work is almost done;
But when woven, drest, and clean,
It may be clothing for a queen.

Sing, my bonny harmless sheep,
That feed upon the mountains steep,
Bleating sweetly as ye go
Through the winter's frost and snow.
Hart and hind, and fallow deer,
Are not half so useful here.
From kings, to him the plough does pull,
Are all ob igod to tarry wool.

Up, ye shepherds! dance and skip,
O'or the hills and vallies trip;
Of tarry wool sing ye the praise,
Sing the flocks that do it raise:

Harmless creatures without blame,
That clothe the back, and feed the home;
Keep us warm, and hearty full;
Let us love the tarry wool.

How happy is a shepherd's life!
Far from courts, and free from strife.
While the ewes do bleat and "baa,"
And the lambkins answer "mae,"
No such music to his ear.
Of thief and fox has he no fear:
Shepherd will watch—dog rend and pull,
And well defend the tarry wool.

He lives content and envies none,
No, not a monarch on his throne;
Though he the royal sceptre sways,
He hath not sweeter holidays.
Who'd be a king, can any tell,
When a shepherd sings so well?
Sings so well, and pays in full,
With honest heart and tarry wool.

"It is a poor heart that never rejoices;" and when we think of the many bleak bitter nights at the close of February and the beginning of March which the shepherds have passed in the open fields, and on the windy hills, in the "lambing season," it gives one pleasure to see them still so happy. Many a lamb would have been lost, but for the care they took of them; for there they waited night after night, amid sleet and storm, in their little temporary huts, ready to rush out in a moment, and pick up and shelter the young lambs, which would otherwise, perchance, have perished in the cold. Proud were they, when finer days came, and they looked on and saw their new-born flocks racing in the meadows.

Now let us peep into that pretty parlour. There sit the farmer's daughters at tea. What piles of cakes, honey, butter, eggs, ham, cold fowl! What smiling faces! and some of them are really beautiful pictures of rosy health. Now they are singing in the kitchen; now the fiddle is heard in the barn; there is giggling and laughter in the orchard; whisperings somewhere in the garden; children playing at hide-and-seek in the stack-yard. See where those dark-eyed seducers, the gipsies, have congregated outside the farm-yard; somehow or another they have come in for their share of the feast: by and by, they will become bolder; one, bearing a child, will venture into the barn; another will follow; and as the ale-horn circulates, it will, long before midnight, be "Hail fellow! well met!"

Then come the morris dancers, "Robin Hood," and "Maid Marian," with such poetry as is not to be found in the old ballads. Well, there is plenty for all; the ale for Sheep-Shearing Feast was brewed many a long month ago; and there are still half a dozen barrels untapped in the cellar, all of which were brewed from an extra allowance of malt, for the great occasion of "Sheep-Shearing."

But where is the old farmer? He bade his men fall to, and welcome; and we have not seen him since. No, he is in the large, old-fashioned summer-house at the bottom of his garden, with the butcher, and the miller, and the maltster, and the doctor, and the landlord from the "Black Bull;" and they have drawn the corks of a few bottles of choice port, and are enjoying themselves in their own way. The young lawyer has brought his fiddle, for he is a gentleman fiddler; and the young ladies in the parlour will come soon, and dance on the lawn, for even there the line of distinction is drawn. The wealthy farmer's daughter may condescend just to dance a turn or two in the barn; and when they have gone, the old one-eyed hired fiddler will strike up "Bob and Joan," just to show his contempt for such proud, stuck-up "thingumterrys," as he will call them; "with their waltzes, and quadrilles, and such like outlandish fal-the-rals, as their grandmothers would have been ashamed to have been seen in."

All who have wandered into the country, about the beginning of summer, must have heard the unusual bleating amongst sheep in the neighbourhood of rivers and water-courses; and if they have never beheld such a scene before, must, when they have reached the spot, have looked both with interest and pleasure at a sheep-washing. There stand three powerful sun-burnt fellows, up to the middle in water. A sheep is forced in by a man on the bank; it is seized by the first washer, who, laying fast hold of the fleece, souses the poor creature about, as if he would shake it to pieces; he then looses his hold, and the bleating animal, as he begins swimming towards the shore, is seized by the second washer, in whose hands he fares no better than he did whilst an unwilling prisoner to the first. He bleats more pitifully; and just as he is within a few feet of the shore, souse he goes over and over for the third time, and then he is at liberty. He reaches the bank, and there stands bleating, while the water flows from his heavy fleece. Others who have undergone the same fate bleat in reply; while the unwashed ones are not a bit behind-hand in their complainings, for a hundred sheep "baa" like one.

Then, what a roar of laughter comes ringing upon the air, at the sturdy shepherd boy, who, while thrusting and forcing along some obstinate sheep to the edge of the water, is carried in, headlong, with his woolly companion; and, by an unexpected plunge, both are sent head over ear together, and land alike with a kindred and sheepish look, for Jack is passed from hand to hand, amid loud "guffaws," which are heard half a mile off.

Sometimes the village girls will come down to the sheep-washing, and then there flies round many a rough random shot of country wit: the girls trace strange likenesses amongst the sheep to some envied rival; and, in allusion to the number of lambs, "more is meant than meets the ear." The frailties of some fair Phyllis are shadowed forth; while Damon, although midway in water, turns up to his very ears. You find that Dianas are not the only nymphs who haunt the neighbourhood of these pastoral Arcadias.

We have before spoken of Sheep-Shearing as being an ancient festival, and in the Book of Samuel, we read of Nabul, a man in Maon, whose possessions were in Carmel, who had three thousand sheep and a thousand goats; "and he was shearing his sheep in Carmel. And David heard in the Wilderness that Nabul did shear his sheep. And when David's young men came, they said to Nabul, We come at a good time." We read again, in the same book, of Absalom having sheep-shearers, and inviting all the King's sons to the feast; and David was afraid to let all his sons go, lest they should cause Absalom too great an expense; and further on we find that they made merry with wine. For in our own English poet Herrick, we have it recorded that on such occasions there was always plenty—that the table was strown with no niggard hand.

They should see first and chief
Foundation of the feast—fat beef;
With upper stories mutton, veal,
And bacon, which makes full the meal:
With several dishes standing by,
As here a custard, there a pie,
And here all-tempting furmity.

Summer now reigns in the full womanhood of her beauty. The roses of her lips now pout in the rounded sweetness of their bloom; and the sun has stained her cheeks with the richest dyes of heaven. Her hair is wreathed with the last blossoms of her choicest flowers; and when these are faded, she will begin to look round for her place of rest, for the beautiful summer has attained her full beauty, and is already doomed to die. Slowly, slowly, you see the flowers and leaves falling, to make her death-bed; and soon the sweet songsters will take their departure, for they cannot stay to look, while one so beautiful is about to gather up her gaudy garments in "dying dignity," and stretch herself upon a grave of faded flowers, to die. And yet, once again, Time will meet Summer

At this same place.
She'll look as lovely as of old.
For there will spring another race
Of flowers from out the upturn'd mou'd,
That have been buried long ago.

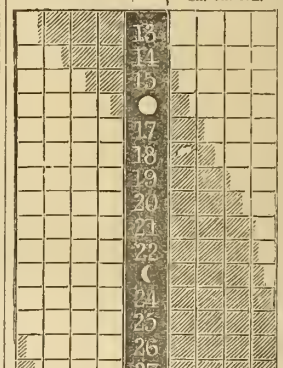
This has ever been our favourite month for angling. Not that we ever stood high as disciples of the "gentle" craft; but rather loved to let our rods lie idly amongst the reeds and flowers; or to watch the float riding lazily upon the ripples, while we whispered to the silvery shiver which the willows were ever making; or, with half closed eyes, lay drowsed beneath the perfume that came floating from some neighbouring bean-field. What a music there was in the lopping of the little ripples, as they came, one after another, to warm themselves on the sunny shore, bowing the reeds that grew a little way out as they passed. Or to watch (as I have, in my poem entitled "Summer Morning," described a scene), when it rained,

The leaves "drop," "drop," and dot the silver stream—
So quick each circle wore the first away.
To see the tufted bullrush stand and dream,
And to the ripple nod its head alway;
The water-flags with one another play.
Bowing to every breeze that blows between,
While purple dragon-flies their wings display;
The restless swallow's arrowy flight is seen,
Dimpling the sunny wave then lost amid the green.

Such sights were more pleasing to us than the capture of a thousand fish.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above horizon	SUN. Sets	MOON. Rises. Afternoon	MOON. Souths. After-noon.	MOON. Height above horizon	MOON. Sets. Morning.	Moon's Age	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon	Da. of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	W	Lammas Day	4 25	6 1	56½	7 46	5 55	10 19	18¼	1 54	13	No Tide.	0 25	213
2	Th	Antares souths 7h. 35m. P.M.	4 27	5 57	56¼	7 44	6 39	11 8	19¼	2 44	14	0 50	1 15	214
3	F	Alphs Herculis souths 8h. 18m. P.M.	4 28	5 52	56	7 43	7 16	11 56	21¾	3 40	15	1 35	1 55	215
4	S	[Oyst. seas. beg.	4 29	5 47	55¾	7 41	7 49	Morning.	25¼	4 42	●	2 14	2 30	216
5	S	9TH S. aft. TRIN.	4 31	5 42	55½	7 40	8 17	0 44	27½	5 46	17	2 50	3 10	217
6	M	Transfiguration	4 33	5 35	55¼	7 38	8 43	1 31	31¼	6 53	18	3 25	3 40	218
7	Tu	Name of Jesus	4 35	5 28	55	7 36	9 10	2 18	36	8 2	19	4 0	4 15	219
8	W	Alpha Ophiuchi souths 8h. 18m. P.M.	4 36	5 21	54¾	7 34	9 34	3 6	40½	9 13	20	4 32	4 50	220
9	Th	Acc L. Phil. 1830	4 38	5 13	54¼	7 32	10 1	3 53	45	10 23	21	5 10	5 30	221
10	F	*St. Lawrence*	4 39	5 4	54	7 31	10 30	4 43	49	11 37	22	5 50	6 10	222
11	S	Dog Days end	4 41	4 55	53¾	7 29	11 2	5 34	52½	Afternoon	☾	6 35	7 0	223
12	S	10th S. aft. TRIN.	4 43	4 46	53½	7 27	11 41	6 28	55	2 6	24	7 25	7 55	224
13	M	Qu. Adel. b. 1792	4 44	4 35	53¼	7 25	Morning.	7 25	56½	3 16	25	8 30	9 10	225
14	Tu	Polaris souths 3h. 36m. A.M.	4 45	4 25	53	7 23	0 30	8 24	56½	4 21	26	9 45	10 25	226
15	W	As. of B. V. Mary	4 46	4 13	52½	7 21	1 27	9 24	55¼	5 19	27	11 10	11 45	227
16	Th	Alpha Lyræ souths 8h. 50m. P.M.	4 48	4 2	52¼	7 19	2 32	10 24	52½	6 9	28	No Tide.	0 20	228
17	F	Duchess of Kent	4 49	3 49	52	7 17	3 43	11 22	—	6 49	29	0 50	1 20	229
18	S	[born 1786	4 51	3 37	51½	7 15	4 59	Afternoon	49¼	7 23	○	1 45	2 10	230
19	S	11TH S. aft. TRIN	4 52	3 23	51¼	7 13	6 15	1 10	45	7 53	1	2 35	2 55	231
20	M	Beta Lyræ souths 8h. 50m. P.M.	4 54	3 10	51	7 11	7 28	2 0	40¾	8 20	2	3 20	3 40	232
21	Tu	Delta Aquilæ souths 9h. 17m. P.M.	4 55	2 55	50½	7 9	8 39	2 48	36	8 45	3	3 55	4 15	233
22	W	Gamma Aquilæ souths 9h. 34m P.M.	4 57	2 41	50¼	7 7	9 49	3 35	31¾	9 9	4	4 40	5 0	234
23	Th	Alpha Aquilæ souths 9h. 31m. P.M.	4 59	2 25	50	7 5	10 56	4 20	28	9 34	5	5 15	5 35	235
24	F	*St. Bartholemew*	5 0	2 10	49½	7 3	Afternoon	5 6	24½	10 2	6	5 55	6 15	236
25	S	[Pr. Alb. b. 1819	5 2	1 54	49¼	7 1	1 4	5 52	22	10 34	☽	6 30	6 55	237
26	S	12TH S. aft. TRIN	5 3	1 37	49	6 59	2 3	6 38	20¼	11 10	8	7 15	7 40	238
27	M	Beta Aquilæ souths 9h. 24m P.M.	5 5	1 20	48½	6 57	2 58	7 25	18¾	11 51	9	8 10	8 50	239
28	Tu	*St. Augustin*	5 7	1 3	48¼	6 55	3 48	8 13	18½	Morning.	10	9 25	10 5	240
29	W	St. John the Bap-	5 8	0 45	47¾	6 53	4 33	9 1	19¼	0 38	11	10 45	11 20	241
30	Th	tist beheaded	5 10	0 27	47½	6 51	5 14	9 50	20¾	1 31	12	11 55	No Tide.	242
31	F	Alpha Cygni souths 9h. 56m. P.M.	5 12	0 9	47¼	6 48	5 49	10 38	23½	2 31	13	0 25	0 50	243

DURATION OF MOONLIGHT.



AUGUST.

The Sun is in the sign Leo till the 23rd, on which day, at 10h. 52m. A.M., he enters that of Virgo (the Virgin). On the 1st he is 96,386,000 miles from the Earth. On the 1st he rises 6°¼ N. of E.N.E.; on the 15th, at the E.N.E.; and on the last day, at 2°¾ N. of E. by N. He sets at 6°¼ N. of W.N.W., on the 1st; at the W.N.W., on the 15th; and at 2°¾ N. of W. by N., on the 31st. His time of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

He is totally eclipsed on August 18th; this eclipse is visible in Australia and the Indian Ocean, but not here.

The Moon is moving on the boundaries of Aquila and Sagittarius on the 1st and 2nd; in Capricornus, on the 3rd; in Aquarius, on the 4th, 5th, and 6th; in Pisces and Cetus, alternately, till the 11th; in Taurus, on the 12th and 13th; in Gemini, on the 14th and 15th; in Cancer, on the 16th and 17th; in Leo, on the 18th and 19th; in Virgo, on the 20th, 21st, and 22nd; in Libra, on the 23rd and 24th; in Ophiuchus, on the 25th, 26th, and 27th; near Aquila and Sagittarius, on the 28th and 29th; in Capricornus, on the 30th; and in Aquarius, on the 31st.

She *rises* before the Sun sets from the 1st to the 3rd; after the Sun sets, and before he rises, or during the night, from the 4th to the 18th; and after he rises, or during the day, from the 19th. She *sets* before the Sun rises till the 3rd; during the day, from the 4th to the 17th; and after the Sun sets, from the 18th. For the actual times, see the opposite page.

She is on the Equator on the 8th and on the 21st. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Saturn on the 8th; Uranus, on the 9th; Mars, on the 12th; Venus, on the 13th; and Mercury and Jupiter, on the 18th.

She is full on the 4th, and new on the 18th; and an Eclipse of the Sun takes place on the latter day, but it is invisible in this country.

Mercury is in the constellation Gemini on the 1st; in that of Cancer, from the 2nd to the 11th; and in that of Leo, from the 12th.

He is a morning star till the 16th, and an evening star towards the end of the month. On the 1st he rises at 1h. 27m.; on the 5th, at 1h. 12m.; on the 10th, at 45m.; on the 15th, at 13m; and on the 16th, at 8m. before the Sun rises He sets on the 31st at 29m. after the Sun sets. He is favourably situated for observation before sunrise during the first few days of this month. He rises, on the 1st, at 1° N. of N.E. by N.; on the 5th, at the N.W. by N; on the 18th, at W.N.W.; and on the 28th, at the W. by N. points of the horizon. He sets, on the 18th, at W.N.W.; and on the last day, at the W. by N. He is moving eastward among the stars during the month; he is near the Moon on the 18th, and Jupiter on the 20th; and is in superior conjunction with the Sun on the 18th.

Mars is in the constellation Taurus throughout the month.

He is visible throughout the greater part of the night; and rises, on the 1st, at 11h. 10m. P.M.; and on the last day, at 10h. 2m. P.M.; on the 1st, at 5°⅔ N. of E.N.E.; and on the 27th, at N E. by N. His times of southing are given below; and he sets at about 2½h. P.M. He is moving eastward among the stars, and is near the Moon on the 12th

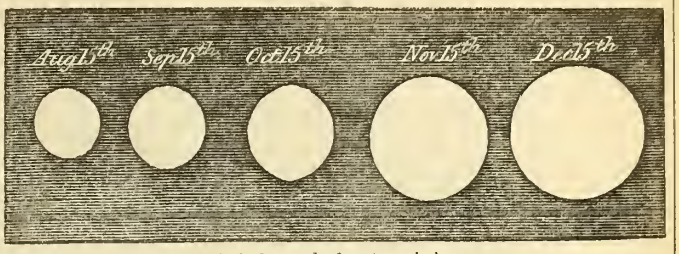
This Planet is now becoming conspicuous; his places among the fixed stars, during this and the following month, are shewn in the annexed diagram.

PATH OF MARS, DURING THE MONTHS OF AUGUST AND SEPTEMBER, 1849.

Scale, 12 degrees to one inch.

From this time to the end of the year his telescopic appearance undergoes considerable changes, and which are shewn in the following diagram.

RELATIVE APPEARANCES OF MARS, IN THE MONTHS OF AUGUST TO DECEMBER, 1849.



Scale, 20 seconds of arc to one inch.

Venus is in the constellation Taurus till the 2nd; in that of Orion, from the 3rd to the 8th; in that of Gemini, from the 9th to the 29th; and in Cancer, on the 30th and 31st.

She is a morning star throughout the month; and rises, on the 1st, at 0h. 59m. A.M.; on the 15th, at 1h. 2m. A.M.; and on the last day, at 1h. 22m. A.M., near the N.E. by N. point of the horizon all the month. She is moving eastward among the stars throughout the month, and is near the Moon on the 14th.

Jupiter is in the constellation Leo throughout the month.

He is in an evening star; and sets at 8h. 33m. P.M., on the 1st, at 1°½ S of W.N.W.; and at 6h. 46m. P.M., on the last day, at 6° N. of W. by N. He is moving eastward among the stars; and is near the Moon on the 18th, and Mercury on the 20th. He is in conjunction with the Sun on the 26th.

Saturn is in the constellation Cetus throughout the month.

He is visible during the greater part of the night; and rises, on the 1st, at 9h. 45m. P.M.; on the 15th, at 8h. 50m. P.M.; and on the last day, at 7h. 47m. P.M., near the east part of the horizon. He is nearly stationary among the stars during the month, and is near the Moon on the 8th.

Uranus rises about 4° N. of E. by N., on the 1st, at 10h. 7m. P.M.; and on the last day, at 8h. 8m. P.M. He souths, on the 15th, at 4h. 4m. A.M., at an altitude of 48°. He is nearly stationary among the stars, and is near the Moon on the 9th.

ON PLANETARY PHENOMENA.

(*Continued from July.*)

the places in the heavens occupied by the planet are also carefully indicated; thus enabling any person to find this planet without telescopic assistance.

The phenomena exhibited by the Planet Venus are always interesting; her recession from the Sun to a limited distance, remaining stationary there for a few days, then moving towards the Sun, passing him, and receding to a limited distance on the opposite side remaining stationary for a few days, and then returning, and so on, oscillating, as it were, backwards and forwards, the Sun being the apparent centre of her vibrations, like Mercury in this respect (see pages 27 and 37 of the Almanack for 1846). By comparing the motions of the Moon with those of the above planets, it will be seen to be widely different from them. The Moon never returns backward, or becomes stationary, but performs the entire circuit of the heavens, and overtakes the Sun, passes him, and again proceeds on her course as before.

The orbit of the planet Mars encloses that of the Earth; and he is in opposition once in two years only. During that year in which he is not in opposition, he is dull and small (see page 9 of the Almanack for 1846); but near the period of his opposition he becomes large, red, and splendid. When in opposition, he rises as the Sun sets; and the Earth and planet are in the same straight line, which line, if continued, would pass through the Sun. Now, as the orbit of Mars encloses that of the Earth, it will be seen that at this time Mars is nearer to the Earth than at any other time—nearer than when in conjunction by the entire diameter of the Earth's orbit, or 190 millions of miles. This remark applies to all the superior planets, or those whose orbits enclose that of the Earth. This will be evident by reference to the diagram in February, where it will be seen that when the Earth is at E 2, it is nearer to Jupiter by the whole diameter of her orbit, than when she occupies the position E; this difference of distance is so large in proportion to the whole distance of Mars from the Earth, as to cause a very great difference in his appearance at different times; but this difference of appearance is

(*Continued on page 52*).

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Afternoon	Saturn. Morning
	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 2	8 53	6 47	1 21	3 54
6	11 23	8 56	6 41	1 6	3 34
11	11 45	8 58	6 34	0 50	3 14
16	Aftern.	9 2	6 27	0 34	2 54
21	0 24	9 6	6 20	0 19	2 33
26	0 39	9 9	6 13	0 3	2 13
31	0 51	9 14	6 5	Morn.	1 52

JUPITER'S SATELLITES.

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
130 Tauri	6	14 0 52 A.M.	Bright
		14 1 42 A.M.	Dark

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Full Moon	..	4D.	3H.	52M.	A.M.
Last Quarter	..	11	1	33	P.M.
New Moon	..	18	5	33	A.M.
First Quarter	..	25	4	56	P.M.
Perigee	.. ..	15	3	0	P.M.
Apogee	.. ..	27	11	0	A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination North.	VENUS. Right Ascension	VENUS. Declination North.	MARS. Right Ascension	MARS. Declination North.	JUPITER. Right Ascension	JUPITER. Declination North.	SATURN. Right Ascension	SATURN. Declination North.	URANUS Right Ascension	URANUS Declination North
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	7h. 42m	21° 37′	5h. 33m	20° 18′	3h. 27m	17° 29′	10h. 1m	13° 4′	0h. 33m	0° 50′	1h. 39m	9° 36′
6	8 22	20 33	5 55	20 43	3 40	18 18	10 5	12 42	0 32	0 45	1 38	9 36
11	9 4	18 24	6 18	20 57	3 53	19 4	10 9	12 20	0 32	0 40	1 38	9 35
16	9 45	15 25	6 41	21 0	4 6	19 45	10 14	11 57	0 31	0 34	1 38	9 34
21	10 23	11 54	7 4	20 50	4 19	20 22	10 18	11 31	0 30	0 28	1 38	9 32
26	10 57	8 7	7 28	20 27	4 31	20 56	10 22	11 11	0 29	0 20	1 38	9 30

AUGUST.—HARVEST HOME.

About the cart hear how the rout
Of rural younglings raise the shout;
Pressing before, some coming after,
Those with a shout, and these with laughter;
Some bless the cart, some kiss the sheaves,
Some prank them up with oaken leaves.—HERRICK.

NEITHER the harvest-supper nor the sheep-shearing-feast present such poetical features as the rural employments which terminate in their celebration, for both in the end are but reduced to the common and necessary acts of eating and drinking. In harvest-time we see an old and beautiful picture; it was the same thousands of years ago; it is familiar to us in the pages of Holy Writ. Abraham and the early patriarchs have looked upon such scenes, for it has ever been a time of rejoicing. What rich pictures, mellowed with the sunsets of ages, rise before the eye as we look upon the sun-browned reapers! scenes not there presented, but such as have sprung from the events caused by good or bad harvests. We see, in Egypt, Joseph and his brethren; Abraham and Isaac overlooking the harvest-field from their tents; lands sold for measures of corn; David's house-bold busy in the fields; Ruth "weeping amid the alien corn;" Our Saviour gathering the ears of wheat on the Sabbath; and a hundred other incidents which are connected with the sacred history of our religion.

But beautiful as may have been the harvest-fields of Palestine or Egypt, they could never have excelled in picturesque effect those which we have seen in our own England, hemmed in every way by rich and park-like scenery. Here vast breezy uplands, that come sweeping down into broad pasture-lands, all waving golden with early corn. Reapers and gleaners—men, women, and children—clothed in every variety of homely costume, standing, stooping, or sitting down beside the piled-up sheaves, or half-buried in some little hollow behind the standing corn. Little village urchins, whose bare hard legs are pierced all over with the sharp stubble, and who thrust straw and all into their small gleaning-bags, so that they may appear full against the given time of either luncheon or dinner, the only difference in the meal consisting in the name given to it, for the homely viands are the same. Nor are the actions of the reapers less interesting; there is a peculiar art in making those straw bands in which the sheaves are bound, in twisting the heads of corn together so as not to shake out the grain, in placing them nicely upon the stubble, and, finally, in tying up the sheaf itself, and securing the stubble ends of the band, and giving to them all, when bound, a free and plumy appearance. We see such scenes as bring before the eye Keats's splendid description of autumn, where he says:—

Sometimes whoever seeks abroad may find
Thee sitting careless on a granary floor,

Thy hair soft-lifted by the winnowing wind;
Or on a half-reaped furrow sound asleep,
Drowsed with the fume of poppies; while thy hook
Spares the next swathe, and all its twinèd flowers;
And sometimes, like a gleaner, thou dost keep
Steady thy laden head across a brook.

But the bringing home of the last load forms the subject of our present Sketch, such as we have witnessed, and has received all but life and motion from the hands of the artist. The farmer's daughter, an interesting girl, was selected for the Harvest Queen, and dressed out very becomingly for the occasion, her little round straw-hat wreathed with ears of corn and convolvuluses; she was seated sideways on the leader, a fine chesnut-coloured horse, whose head was decorated with bunches of corn-flowers and blue ribbons; the hat of the driver was also adorned with bows of the same hue, "true blue" being your rustic's favourite colour; every horse in the team was distinguished by similar ornaments. The last "stouk" is, however, still standing in the field, the topmost sheaf of which is buried beneath bunches of rich-coloured ribauds and flowers; long streams of blue and yellow and crimson have been floating out from the top of that "shock" ever since morning, and now the whole row along the furrow has disappeared, excepting that. At last the waggon approaches it, the gleaners and reapers rend the air with their loud huzzas, as the "harvest-sheaf," the crown of the field, is held high on the long pitching-fork by the labourer; it is then received by the man on the top of the load, and then reared on end, the most conspicuous object, through its gaudy colours, in the whole landscape. A few lines from our "Book of Autumn" will close the scene:—"Onward comes the waggon—the last load reaches the village—at the end of which the worthy farmer lives, and every cottager rushes out with a hearty welcome to hail the procession as it passes. The little tailor uncrosses his legs, throws down his goose and sleeve-board, and with his hose ungartered and hanging about his heels, his spectacles thrust high up his forehead, raises his child-like voice, and brandishes his shears above his head, causing them to snap together at every shout, as he joins in the loud jubilee. The smoke-grimed blacksmith leans his naked and brawny arms across the half-door of his smithy, while his man John stands in the middle of the road swinging his heavy hammer in the air, and grinning from ear to ear with delight. The wheelwright leaves the tire half-driven in the smoking wheel; and, untying his painted and dirty apron, shakes it out with all his might, causing the chips, dirt, and shavings to fly in every direction, while his deep voice rings out like the peal of a trumpet. The lame shoemaker next appears, bearing in his hand one of the farmer's heavy top-boots, which he was repairing when the waggon came up. He seems almost as much delighted as if the whole load were his own; his wife and children have been allowed to glean ever since the first day the reapers put their sickle into the standing corn, and the poor fellow is grateful for such kindness. The deaf old grandmother, who seldom quits her creaking wicker-chair and spinning-wheel in the chimney-corner, comes out, with her withered hand raised to shade the sunshine from her furrowed face, and, followed by the old grey cat, she raises the tin trumpet to her ear, and drinks in the glad sounds which she has been accustomed to hear through fourscore bygone harvests; and all the long evening the deaf old woman will be happy and talkative, telling about the May-days, and sheep-shearing feasts, and harvest-homes she attended when young, what she wore, and with whom she danced; and before her dim eyes will pass in long array the scenes of sixty years, and she will again recal the features of many who are now no more,

Each in his narrow cell for ever laid,
The rude forefathers of the hamlet sleep.

Every one at all conversant with history has read the sufferings and privations which whole nations have endured in times of scarcity, and can well understand why in the olden time there was so much rejoicing over a plentiful harvest. The richest crop ever hangs upon a "slender thread;" the finest fields of corn that ever bowed in the breeze or glittered in the summer sunlight, a few days' rain may blacken and destroy, and render unfit for food. Man cannot protect his crop against the elements, until it is garnered. Although the broad seas are now open, and ships from every corner of the globe may pour foreign grain into every store-house in England, yet we shall be sorry to see the day when she puts her chief trust in such supplies. She is not yet prepared to turn her rich corn-fields into grounds for factories, nor to trust to other nations for her supplies of corn. England, from the very richness of its soil and beauty of its scenery, was ordained to be an agricultural country; and however far its great cities may in time extend, it must be the work of ages to blot out the farms, and homesteads, and green rural scenes which are still its greatest charms.

Our merchants and manufacturers struggle on for years in close rooms and crowded offices, in the hope of at last retiring into some little village with its orchard, garden, and green field, and there to end their days in peace and tranquillity. Such a wish has ever been foremost in the bosoms of our great poets, statesmen, and philosophers. It is a distinguishing feature in the character of an Englishman; and perhaps in no other nation in the world is there such a thirst for this green retirement and domestic peace.

Autumn is a busy time with many animals as well as with man. The squirrel and several kinds of mice store up provision against winter, for although they hibernate a great portion of that season, yet a mild, warm atmosphere often awakes them, when they have recourse to the larder, then turn round, and sleep again. Mr. Couch, in his "Anima Instinct," says, "Long before the period of hibernation, and while the degree of temperature, and the abundance of subsistence, occupation, and amusement, one would suppose, would postpone the anticipation of such a state, creatures ordinarily subject to it are found entering upon a series of labours which, to the eye of reason, are as clearly indications of prospective intention as the building of a nest for incubation, or the storing of food for a time of scarcity. In some parts of the Russian dominions, as early as the month of August, while summer is in its glory, and everything inviting to enjoyment of the present rather than care for the future, the rat-hare sets about collecting the herbs which are to form its winter bed, and spreads them out to dry in the sun. In September these dried vegetables are gathered into heaps, which are sometimes the fruits of the labours of a single individual, and at others the united efforts of a company. The hampster in the Alps, and, in our own country, the dormouse, the shrew, and, in a less degree, the hedgehog, have the same habits; in all their proceedings making a marked distinction between their ordinary summer residences, or the receptacles for their young, and those in which they are to pass the time of insensibility. After accomplishing these preparations, a long time is suffered to pass before these animals finally retire to their winter retreats, and then they wrap themselves up in the accumulated materials, with a care and skill that indicate how well they are aware of the danger of exposure. The dormouse and harvest-mouse (whose summer nests have been placed on elevated stalks of grass, or in the branches of a furze-bush) now wrap themselves up in a ball, so closely woven together as to admit of being rolled about without disturbing its slumbering inhabitant, and stow themselves away in some crevice or recess among the entangled roots of a tree, beneath the soil." Mr. Bell asserts that the hibernation of the hedgehog "is as complete as that of any animal inhabiting this country;" he further asserts (and we know no higher authority) that it lays up no provision for winter. On the contrary, although the squirrel sleeps away a great portion of the cold season, it lays up ample stores—not all in one place, but concealing the different stores in the holes of several trees around its haunts. Autumn is, therefore, a busy time with this beautiful and clean little animal. The long-tailed field-mouse is a great hoarder of food for winter, which consists of nuts, acorns, corn, and a variety of seeds; and sometimes a pig will come smelling and rooting about, to discover the treasure, and devour it. The following, which we wrote some time ago, to amuse a juvenile class of readers, will not be out of place here; it is supposed to embody the feelings of a long-tailed field-mouse, who sits hiding himself in a dark corner while a great hungry hog is eating up all his stock of provisions. "I wish it may choke you," said the field-mouse, "that I do, you great grunting brute! There go all my nice acorns, a dozen or more at a mouthful. Twelve long journeys had I in a day to the foot of the old oak tree to bring home a dozen of those—such a hard day's work that I could scarcely sleep a wink at night after, so much did my poor jaws ache; for I was forced to bring home every one in my mouth; and now that monster is gobbling up the whole board. He devours what cost me the labour of a month in a minute or two! Whatever I shall live on in winter I don't know. There goes my corn, too, which I dragged home, by an ear at a time, all the way from the harvest field on the other side of the wood, and with which I was often forced to rest two or three times during my journey; and sometimes I was compelled to drop an ear, and fight some other field-mouse that had a longer tail than myself, who tried to take the ear away under the pretence of helping me home with it, when I knew well enough it was his own nest he intended carrying it to. I wish I were big enough to thrash that great, ugly, grunting brute; really it makes one feel savage to think that after so much fetching, and carrying, and striving from morning to night—packing all up so snugly together, and not leaving even a single grain littered about, that a great thief should come in this way, break into one's house, and eat up everything, rump and stump." Naturalists say, that, after such a disaster, the field-mouse will fight his way into another nest, and either oust the inhabitant, or fall in the attempt. Wilson has beautifully depicted the pleasure of wandering amongst the mountains at this season of the year. "The wanderer, or hunter," he says,

Now meets on the hill
The new-waken'd daylight so bright and so still;
And feels, as the clouds of the morning unroll,
The silence, the splendour ennoble his soul.
'Tis his on the mountains to stalk like a ghost,
Enshrouded in mists in which nature is lost,
Till he lifts up his eyes, and flood, valley, and height,
In one moment all swim in an ocean of light;
While the sun, like a glorious banner unfurl'd,
Seems to wave o'er a new, more magnificent world.

The scream of the eagle, the bounding of the mountain-deer, and the thunder of the cataract, complete the picture, and add their voices to the solitude. "Insects still continue to swarm," says Forster, "and to sport in the sun from flower to flower: it is very amusing to observe in the sunshine of an August morning their animation. The beautiful little blue butterfly is then all life and activity, flitting over the flowers and grass with remarkable vivacity. There seems to be a constant rivalship between this beauty and another no less elegant little beau, though of a different colour, frequenting the same station, attached to the same head of clover or of hare-bell; wherever they approach, mutual animosity seems to possess them; and, darting on each other with courageous rapidity, they buffet and contend until one is driven from the field, or to a considerable distance from his station, when the victor again returns to his post in triumph; and this contention is renewed so long as the brilliancy of the sun animates their courage." We have an admirable description of a butterfly that went out for a day's pleasure, written by the author of the immortal "Fairy Queen," who tells us how it at last reached a garden, and there

Arriving, round about doth flie,
From bed to bed, from one to t'other border;
And takes survey, with curious busy eye,
Of every flower and herb there set in order;
Now this, now that, he tasteth tenderly;
Yet none of them he rudely doth disorder.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'clock	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. After-noon.	MOON. Souths. Height above horizon	MOON. Sets Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 5h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 7h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	Prdge. shoot. beg	5 13	0 10	46½	6 46	6 20	11 26	26½	3 34		14		1 10	1 30	244
2	S	13TH SUN. after	5 15	0 29	46½	6 44	6 48	Morning	30¼	4 41		15		1 50	2 10	245
3	M	Trinity. Fire of London, 1666.	5 16	0 48	46	6 42	7 13	0 14	34½	5 50		16		2 30	2 45	246
4	Tu	Alpha Lyræ souths 7h. 36m. P.M.	5 18	1 7	45¾	6 40	7 38	1 2	39	6 59		17		3 0	3 20	247
5	W	*Old. St. Bartholo.*	5 20	1 27	45¼	6 37	8 6	1 50	43½	8 14		18		3 35	3 50	248
6	Th	Beta Lyræ souths 7h. 42m P.M.	5 21	1 47	45	6 35	8 34	2 40	48	9 27		19		4 10	4 30	249
7	F	*Eunurchus*	5 23	2 7	44½	6 32	9 4	3 31	51½	10 40		20		4 45	5 5	250
8	S	Nat. of B.V.M.	5 24	2 28	44¼	6 29	9 42	4 24	54½	11 55		21		5 25	5 45	251
9	S	14TH S. aft. Trin.	5 26	2 48	43¾	6 27	10 26	5 20	56¼	Afternoon		22		6 10	6 35	252
10	M	Gamma Aquilæ souths 8h. 19m. P.M.	5 27	3 9	43½	6 25	11 18	6 17	56¾	2 13		23		7 0	7 35	253
11	Tu	Alpha Aquilæ souths 8h. 20m. P.M.	5 29	3 29	43	6 23	Morning.	7 15	56	3 12		24		8 10	8 50	254
12	W	Beta Aquilæ souths 8h. 21m P.M.	5 31	3 50	42½	6 20	0 18	8 13	54	4 3		25		9 35	10 15	255
13	Th	Alpha Cygni souths 9h. 5m P.M.	5 32	4 11	42¼	6 18	1 26	9 11	50¾	4 46		26		11 0	11 40	256
14	F	*Holy Cross*	5 34	4 32	42	6 16	2 39	10 6	47	5 21		27		No Tide.	0 12	257
15	S	[Fox died, 1806	5 35	4 53	41½	6 14	3 52	10 59	42¾	5 52		28		0 40	1 10	258
16	S	15TH S.aft. Trin.	5 37	5 14	41¼	6 12	5 7	11 49	—	6 18		29		1 35	1 57	259
17	M	*St. Lambert*	5 38	5 35	40¾	6 9	6 20	Afternoon	38¼	6 45		0		2 15	2 40	260
18	Tu	G. I. and H. land.	5 40	5 56	40¼	6 7	7 30	1 25	33¾	7 9		1		2 55	3 15	261
19	W	Ember Week	5 42	6 17	40	6 5	8 39	2 12	29¾	7 36		2		3 35	3 50	262
20	Th	Beta Aquarii souths 9h. 24m. P.M.	5 43	6 38	39½	6 2	9 46	2 58	26	8 2		3		4 10	4 30	263
21	F	*St. Matthew*	5 45	6 59	39¼	6 0	10 49	3 44	23	8 32		4		4 40	5 0	264
22	S	Autumn com.	5 47	7 20	38¾	5 58	10 52	4 31	20¾	9 6		5		5 20	5 30	265
23	S	16TH S. aft. Trin.	5 48	7 40	38½	5 56	Afternoon	5 18	19¼	9 45		6		5 55	6 10	266
24	M	Epsilon Pegasi souths at 9h. 21m P.M.	5 50	8 1	38	5 54	1 41	6 6	18¾	10 30		7		6 35	6 55	267
25	Tu	Alpha Aquarii souths 9h. 38m. P.M.	5 51	8 22	37¾	5 52	2 28	6 53	18¼	11 20		8		7 25	7 55	268
26	W	*St. Cyprian*	5 53	8 42	37¼	5 50	3 10	7 41	20	Morning		9		8 35	9 15	269
27	Th	Fomalhaut souths 10h. 24m. P.M.	5 55	9 2	36¾	5 47	3 47	8 29	22	0 16		10		9 58	10 35	270
28	F	Sheriffs sworn	5 56	9 22	36½	5 45	4 18	9 17	25	1 17		11		11 15	11 50	271
29	S	Michaelmas Day	5 58	9 42	36	5 43	4 47	10 5	28½	2 23		12		No Tide.	0 15	272
30	S	17TH S. aft. Trin.	5 59	10 1	35¾	5 41	5 14	10 54	32¾	3 31		13		0 40	1 0	273

SEPTEMBER.

The Sun is in the sign Virgo till the 23rd, on which day, at 4h. 3m. A.M., he enters that of Libra (the Balance), and Autumn commences.

On the 1st he is 95,806,000 miles from the earth. On the 1st he rises at ¼° N. of E. by N.; and on the 23rd, at the E. He sets, on the 1st, at the W. by N.; and on the 23rd, at ¼° S. of W. points of the horizon. His time of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The Moon is in the constellation Aquarius on the 1st and 2nd; in Pisces and Cetus alternately, till the 7th; in Taurus, on the 8th, 9th, and 10th; in Gemini, on the 11th and 12th; in Cancer, on the 13th; in Leo, on the 14th and 15th; in Virgo, from the 16th to the 19th; in Libra, on the 20th and 21st; in Ophiuchus, on the 22nd and 23rd; near Aquila and Sagittarius, on the 24th, 25th, and 26th; in Capricornus, on the 27th; and in Aquarius, till the 30th, on which day she passes into Pisces.

She rises, on the 1st, at 53m. before the Sun sets; on the 2nd, at 4m. after he sets; from the 5th to the 16th, during the night; and from the 17th, during the day. She sets before the Sun rises, on the 1st and 2nd; during the day, from the 3rd to the 15th; and after the Sun sets, or during the night, from the 16th.

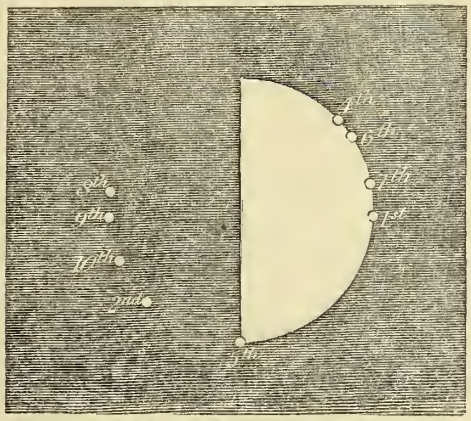
She is on the Equator on the 4th and on the 17th. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Saturn on the 4th; Uranus, on the 6th; Mars, on the 9th; Venus, on the 13th; Jupiter, on the 15th; and Mercury, on the 18th.

She is full on the 2nd, and new on the 16th; and an Eclipse of the Moon takes place at the former time, but invisible in this country.

During the night, which is common to the 8th and 9th, the Moon will occult several stars. The form of the illuminated part of the Moon at the times will be that of a half-moon nearly; and, consequently, one-half of the phenomena will take place at the bright limb, and the other at the dark limb. To facilitate the observation of these phenomena, the following diagram is annexed.

OCCULTATION OF STARS BY THE MOON, ON SEPTEMBER 8TH AND 9TH.



		D. H. M.		D. H. M.
71 Tauri	will disappear at the place marked	1 at 8 10 1 P.M.	and re-appear at the place marked	2 at 8 10 47 P.M.
Theta 2 Tauri	"	3 at 8 11 10 "	"	5 at 8 11 37 "
80 Tauri	"	4 at 8 11 27 "	"	8 at 9 0 21 A.M.
81 Tauri	"	6 at 8 11 40 "	"	9 at 9 0 36 "
85 Tauri	"	7 at 9 0 13 A.M.	"	10 at 9 1 13 "

Mercury is in the constellation Virgo throughout the month.

He is an evening star; and sets, from the 1st to the 25th, at 28m. to 30m. after the Sun sets; he is, therefore, not very favourably situated for observation. He sets, on the 6th, at the W.; on the 16th, at the W. by S.; and on the 28th, at the W.S.W. points of the horizon. He is moving eastward among the stars during the month; is near the Moon on the 18th, and Spica Virginis on the 20th, as shewn in the annexed diagram. He is at his greatest elongation on the 30th.

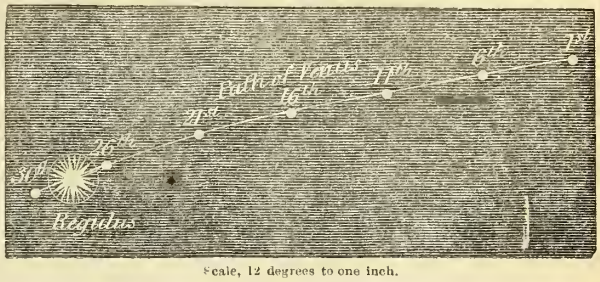
PATH OF MERCURY, FROM THE 6TH OF SEPTEMBER, 1849, TO THE END OF THE MONTH.

Scale, 12 degrees to one inch.

Venus is in the constellation Cancer till the 16th, and in that of Leo, from the 17th.

She is a morning star throughout the month; and rises, on the 1st, at 1h. 23m. A.M.; and on the last day, at 2h. 33m. A.M.; at 9° N. of E.N.E. on the 1st, and at the E.N.E. on the 24th. She is moving eastward among the stars throughout the month; is near the Moon on the 13th; is moving towards Regulus till the 26th; is near this Star on the 27th; and moves eastward from it after the 27th, as shewn in the annexed diagram.

PATH OF VENUS, IN THE MONTH OF SEPTEMBER, 1849.



Scale, 12 degrees to one inch.

Mars is in the constellation Taurus throughout the month.

He is visible throughout the greater part of the night; and rises, on the 1st, at 10h. 1m. P.M.; and on the last day, at 8h. 57m. P.M.; at ¾° N. of N.E. by N. on the 1st, and at 3°¾ N. of N.E. by N. on the 30th. His times of southing are given below; and he is, at those times, 60° above the horizon on the 1st day, and 61°¾ on the last day. He sets about 1¾h. P.M. He is moving eastward among the stars, and is near the Moon on the 9th.

Jupiter is in the constellation Leo throughout the month.

He is a morning star; but visible for a short time only. Rises at 4h. 46m. A.M. on the 1st, at 6° N. of E. by N; and at 3h. 27m. A.M., on the last day, at 2°¾ N. of E. by N. He is moving eastward among the stars; and is near the Moon on the 15th.

Saturn is in the constellation Cetus throughout the month.

He is visible throughout the night; and rises, on every day, near the east point of the horizon; at 7h. 43m. P.M., on the 1st; at 6h. 46m. P.M., on the 15th; and at 5h. 42m. P.M., on the 30th; and passes the meridian at an altitude of 39° nearly on every day. He moves very slowly westward among the stars; and is near the Moon on the 4th, and is in opposition to the Sun on the 27th.

Uranus rises about 4° N. of E. by N.; on the 1st, at 8h. 4m. P.M.; and on the last day at 6h. 8m. P.M. He souths on the 15th, at 2h. A.M., at an altitude of 48°; is moving slowly westward among the stars; and is near the Moon on the 6th.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Morning.	Mars. Morning.	Jupiter. Morning.	Saturn. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.
1	0 53	9 14	6 4	11 45	1 48
6	1 2	9 19	5 56	11 29	1 27
11	1 10	9 23	5 48	11 14	1 6
16	1 15	9 27	5 39	10 58	0 45
21	1 20	9 31	5 29	10 42	0 24
26	1 22	9 34	5 20	10 26	0 3
30	1 22	9 37	5 11	10 14	Aftern.

JUPITER'S SATELLITES.

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
e^2 Aquarii	6	1 6 35 P.M.	Dark
		1 7 23 P.M.	Bright
h^1 Aquarii	6	2 8 43 P.M.	Bright
		2 9 53 P.M.	Bright
27 Piscium	5	3 10 28 P.M.	Bright
		3 11 12 P.M.	Dark
Nu Piscium	5	5 10 32 P.M.	Bright
		5 11 11 P.M.	Dark
f Tauri	5¼	7 10 36 P.M.	Bright
		7 11 31 P.M.	Dark

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

					Days of the Month.
Full Moon	.. ..	2D.	5H.	18M. P.M.	1
Last Quarter	..	9	6	55 P.M.	6
New Moon	.. ..	15	4	2 P.M.	11
First Quarter	..	24	11	24 A.M.	16
Perigee	.. ..	11	10	0 A.M.	21
Apogee	.. ..	24	6	0 A.M.	26

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

	Mercury		Venus.		Mars.		Jupiter.		Saturn.		Uranus	
	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	11h.35m	3° 30′	7h.57m	19° 41′	4h.46m	21° 30′	10h.27m	10° 43′	0h.28m	0° 11′	1h.37m	9° 28′
6	12 4	South	8 20	18 49	4 57	21 55	10 31	10 19	0 27	0 2	1 37	9 25
11	12 31	3 53	8 44	17 43	5 8	22 17	10 35	9 55	0 25	South.	1 36	9 21
16	12 57	7 18	9 8	16 24	5 20	22 36	10 39	9 32	0 24	0 16	1 35	9 18
21	13 21	10 26	9 32	14 54	5 30	22 52	10 43	9 9	0 23	0 26	1 35	9 14
26	13 43	13 12	9 55	13 13	5 40	23 5	10 47	8 45	0 21	0 35	1 34	9 10

SEPTEMBER.—A COUNTRY FAIR.

They climb the pole, they run the races,
They laugh to see the clown's grimaces,
They leave behind all grief and care,
And come light-hearted to the fair.

THERE is no place like a country air, wake, or statute, for getting a true insight into the characters of our English peasantry. There all reserve is laid aside, and Johnny and Molly do really enjoy themselves. A stranger might walk a hundred miles through the country, and never meet with a tithe of the character he will here pick up. Johnny invariably carries a stick in his hand, and, unless when talking, eating, or drinking, you find the knob thrust into his mouth. He wears high ankle-boots, laced very tight, and twines the lace three or four times round the ankle before he fastens it. He has on worsted hose, either blue or grey, and prefers having them ribbed. His breeches are either velveteen, corduroy, or velvet, with pearl buttons on the knees, and a large bunch of drab ribbon, the ends of which he likes to see hang a good way down; if these are new, he generally tucks up his smock-frock to show them. His waistcoat is either plush, or a light kind of fustian, stamped all over with spots, rings, squares, or diamonds; if he can get a pattern with half-a-dozen colours in it, he likes it all the better; for if it is large and staring he knows Betty will consider it very neat. His neckerchief is generally either red or yellow; and he likes the ends to hang out a good way, and to feel the "real India" blowing about his face. He rubs up the down on his hat the wrong way to show how thick it is of "beaver;" or he loves to see everything he wears stick out and be conspicuous.

Molly has generally a pair of pattens in one hand, and a cotton umbrella in the other. It matters not how fair or fine it may be—she bought them a Michaelmas or two before, and she argues that it is no use having such things unless she brings them out. If she has a sweetheart, he generally carries the pattens, and they are the cause of a little attention on both sides, for she sometimes says, "Let me carrien 'em a bit, John, to wresten thy fistes;" and he answers, "Noah, Molly, thankeen thee; I wool howd 'em mysen." Her gown is the gaudiest she can purchase—the pattern either a great unnatural flower, or a trailing sea-weed, bordered with shells. She likes a red shawl, because it can be seen a long way off. As soon as they get into the fair, John either buys a pound of gingerbread or nuts, which he ties up in his handkerchief, leaving, however, one corner open, into which they can insert their hands, they crack and munch away while there is one left. Sometimes she says they're "mixed;" and he says "Hey?" They then saunter round and have a look at the shows and booths: he buys a knife with three or four blades, which is only fit to cut butter. Molly purchases a few yards of red or blue ribbon. Sometimes they are

asked to buy a rattle for a baby, a doll, or a cradle; and, oh! how they do laugh! Molly is compelled to dig her elbow into her sweetheart's sides, and to say, "A'done, John, wilt?" They then pay a penny each and have a look into a peep-show; when it is over Johnny wonders however they can get such long streets and big houses into such a little place, and Molly answers that "It's all magic." They next try their fortune in a penny lucky-bag, which they are assured contains "all prizes and no blanks." Johnny gets a cotton stay-lace, and Molly a row of pins. They purchase a song of the ballad singer, which is "all about love and such like:" they then get into a swing-boat, and are tossed up and down until they begin to feel very queer indeed, for they have eaten all the pastry they could fancy, to say nothing of apples, nuts, oranges, pears, plums, and ginger-beer. They then adjourn to the public-house "to rest and settle down a bit:" John meets a few acquaintance and tries to smoke a pipe; this, with a few glasses of ale, sets his tongue a-going. There is generally a recruiting party in the room, and as the ale gets into his noddle he talks about 'listing, at which Molly pulls his sleeve and says, "Duna be a fool, Johnny." He then tries a song; and, to make the tune and the metre harmonise, lays his accents as follows:—

Ass I wass a walkëing out one ë-vë-nine
All down by a river si-dë,
And a gazeing all around me,
A I-rish girl I spi-dë.
Its red and ro-rëë was her lipe,
And so coal black was her hair,
And so cost-lë was the robe of gowd
This I-rish girl did wear.

He offers to thrash, plough, reap, or mow, with "any man i' the room for a cowden guinea, and to put the money down." He gets his comrade who is drinking with him to feel his arm, and sometimes bares it to show the strength of his muscles. He tells how he once lifted a sack of corn into the waggon, without ever letting it rest upon him, only touching it with his hands. He would quarrel were it not for Molly getting up and popping her pattens between her lover and his opponent. Johnny gets half-mellow, is ready for anything, and will go out. Molly has picked up a female companion, whose sweetheart is as far gone as her own, and they follow arm-in-arm to see that nothing happens to their rustic lovers. Now John is either ready to climb the pole for a new hat, ride a donkey race, wheel a barrow blindfold, jump in a sack, or, as he says, "any mander of thing." There is soon seen a lot of sacks full of men, with only a head peeping out, and Johnny's about the most stupid of the whole lot, for he makes up the one of half-a-dozen who begin with jumping in the sacks. He gets in with great difficulty, has his arms thrust down, is tied up above the shoulders, and, when the word "Off!" is given, he is about the first that falls. Molly can hardly unloose him for laughing. "Better luck next time," says Johnny; and he enters the chase for the pig with its soaped tail, rubbing his hand well in the sand to make it rough before he starts. The pig is turned loose, and after him they start. Johnny is beginning to get a little sober by this time, and is, moreover, a capital runner. He seizes the pig by the tail, and is pulled headlong into a ditch, while the grunter escapes and "saves his bacon!" Nor do we ever remember seeing a pig fairly caught in this manner, for the law is, that it must only be captured by laying hold of the tail. Molly has now a job to rub the mud off Johnny, which she does by pulling up large handfuls of grass. While she is cleaning him, he stands very still, and looks very sheepish.

The hat still stands high on the top of the slender pole, ornamented with blue ribbons. The pole itself is rubbed with soft-soap and grease from top to bottom. Those who have attempted to climb are as greasy as butchers. In vain do they try to reach it; sand and sawdust are useless; even the miller's attempt was a failure, although he went up with his pockets filled with flour, and rubbed the pole with it every inch he gained. At length a sweep came, with his soot-bag twisted round him. They shook the pole, but still he continued to ascend, and all the shaking was in vain, for whenever you looked up you saw him looking down, showing his white eyes and white teeth. He trusted to his foot, feet, and hands, together with his long experience in difficult chimnies, and seldom failed to bring down the prize. But the wheelbarrow race, blindfolded, was the best of all, for no one could see the mark he was running at. Some called "Left!" some "Right!" and, as each competitor had only the voices of the bystanders to guide him, away he went at full speed, obeying their directions as well as he could. Some foundered in a neighbouring pond, others in an opposite ditch. Johnny was the most fortunate of the lot, for he trusted to the clanking of Molly's patten-rings (a device of her own, before agreed upon), and won the new smock-frock, with all its garniture of sky-blue ribbons, the perquisites of his beloved Molly—for this stroke of policy was her own.

Nor was the donkey-race the least amusing part of a country fair; although we had bet ten to one on the favourite, there were the same odds against his moving at all—for it was ten to one if he would even start; if he did, we well knew that he could "win in a canter," as they say. Very annoying it was, after having risked all our pocket-money, to see the brute stick his head up against the palings and show his heels at every one who had courage enough to approach him. Yet such was too often the case, for he seemed not to care a straw for the new saddle which was exhibited at the winning-post in the distance. Perhaps if he did turn his eyes in that direction it was with some such thought as "I wish you may get it; catch me at that; were I to win every varlet in the village would want a ride, and I should be compelled to carry him;" and the very thought caused him to "launch out" more viciously than ever.

Such is the picture of an English country fair, or wake, which a traveller may sometimes stumble upon as he comes unawares upon a little village standing half-buried amid the surrounding trees.

The woods are now beautiful; and never did the hand of an artist throw such rich colours upon the glowing canvass as may now be found in the variegated foliage of the trees. The leaves of the beech are dyed in the deepest orange that ever the eye saw gathered in golden clouds around a summer sunset; the dark green of the oak is in parts mellowed into a bronzy brown, blending beautifully with the faded yellow of the chesnut, and the deeper hues of the tall elm; while here and there the sable fir settles down into dark shadows between the alternate tints; and far as the eye can range along the wide outskirts of the forest it revels in the mingled hues of mountain, field, ocean, and sky, as if the flowered meadow, and the purple mountain, and the green billows of the sea, the blazing sunset, and the dark clouds of evening, had all rolled together their bright and sombre hues, and gathered about the death-bed of the beautiful summer. Over the hedgerow trails the rambling briony; and we see bunches of crimson and green berries, half-tempting us by their gushing ripeness to taste the poisonous juice which lies buried beneath their deceptive beauty. The hips of the wild rose rest their rich scarlet upon the carved ebony of the luscious blackberry; while the deep blue of the sloe throws over all the rich bloomy velvet of its fruit, as it stands crowned with its ruddy tiara of hawthorn berries. On the ground are scattered thousands of polished acorns, their carved and clear cups lying empty amongst the fallen leaves until gathered by the village children, who deck their rustic stools with these primitive tea-services, and assemble around them with smiling faces and looks of eager enjoyment, while they sip their sugar and water out of these old fairy-famed drinking vessels. I have attempted to describe the beauty and tranquillity of the calm evenings which we see at the close of summer and the commencement of autumn, in a little poem entitled

THE EVENING HYMN.

Another day, with mute adieu,
Has gone down yon untrodden sky,
And still it looks as clear and blue
As when it first was hung on high:
The sinking sun, the darkening cloud,
That drew the lightning in its rear,
The thunder tramping deep and loud,
Have left no footmark there.

The village bells, with silver chime,
Come soften'd by the distant shore;
Though I have heard them many a time,
They never rang so sweet before.
A silence rests upon the hill,
A listening awe pervades the air;
The very flowers are shut and still,
And bow'd as if in prayer.

And in this hush'd and breathless pause
O'er earth, and air, and sky, and sea,
A still low voice in silence goes,
Which speaks alone, great God, of Thee!
The whispering leaves, the far off brook,
The linnet's warble fainter grown,
The hive-bound bee, the homeward rook—
All these their Maker own.

Now shine the starry hosts of light,
Gazing on earth with golden eyes—
Bright sentinels that guard the night,
What are ye in your native skies?
I know not—neither can I know,
Nor on what leader ye attend,
Nor whence ye come, nor whither go,
Nor what your aim nor end.

I know they must be holy things,
That from a roof so sacred shine,
Where round the beat of angel wings,
And footsteps echo all divine.
Their mysteries I never sought,
Nor hearken'd to what science tells,
For, oh! in childhood I was taught
That God amidst them dwells.

The deepening woods, the fading trees,
The grasshopper's last feeble sound,
The flowers just waken'd by the breeze,
All leave the stillness more profound.
The twilight takes a deeper shade,
The dusky pathways darker grow,
And silence reigns in glen and glade,
While all is mute below.

And other eves as sweet as this
Will close upon as calm a day;
Then sinking down the deep abyss,
Will, like the last, be swept away
Until eternity is gained—
The boundless sea without a shore,
That without time for ever reign'd,
And will when time's no more.

Now nature sinks in soft repose,
A living semblance of the grave;
The dew steals noiseless on the rose,
The boughs have almost ceas'd to wave;
The silent sky, the sleeping earth,
Tree, mountain, stream, the humble sod,
All tell from whom they had their birth,
And cry, "Behold a God!"

In many places in the fields are now found numbers of spider-webs, sometimes in two or three thicknesses, one above the other; they are very annoying to the dogs while hunting, who are frequently compelled to tear them off with their paws. Numbers of these webs may at times be seen floating in the air like huge flakes of snow, and shining like silver as they descend in the sunshine. Partridges now resort to the stubble fields, having been compelled to retreat to cover during the noise and stir attendant upon gathering in the harvest. They prefer, when they have young ones, to nestle in the open fields, as they have there a better chance of escaping from stoats and weasels. Wood-owls are now heard hooting in the night: and during a heavy gale of wind, which brings down thousands of leaves at a gust, the rattling of the branches and the hooting of the owls form a very solemn concert, especially at midnight to the ears of a lonely wayfarer who is making a short cut homeward through an old wood. The air is also now filled with winged emigrants, the down of thistles and dandelions, which go sailing away over many a broad field before they alight, and pitch their tents, in which they sleep throughout the winter—then rise up in a new form in the coming spring. What a beautiful picture is now presented in the Mirror of the Months, when the numerous flock is driven to the fold as the day declines, its scattered members converging towards a point as they enter the narrow opening of their nightly enclosure, which they gradually fill and settle into as a shallow stream runs into a bed that has been prepared for it, and there settles into a still pool. And, again, in the early morning, when the slender barrier that confines them is removed, they crowd and hurry out, gently intercepting each other; and, as they get free, pour forth their white fleeces over the open field, as a lake that has broken its bank pours its waters over the adjoining land; in each case the bells and meek voices of the patient people making music as they move, and the shepherd standing carelessly by leaning on his crook—even as shepherds did in the vale of Arcadia.

Another pleasant picture of autumn is the busy thatcher with the clear bright yellow straw strewn about the foot of his ladder, while he, high up, is making a golden roof over the treasures which have been gathered in from the harvest-field. Your good thatcher is generally an excellent maker of beehives, and his cottage is often situated by the side of a running stream; and there he steeps his straw, and splits his long straight skains of bramble with which he binds his golden-coloured domes together.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises	SUN. Souths. Before 12 o'clock.	SUN. Height above horizon	SUN. Sets	MOON. Rises Afternoon	MOON. Souths. Afternoon	MOON. Height above horizon	MOON. Sets Morning.	Moon's Age	HIGH WATER at London Bridge. Morning	HIGH WATER at London Bridge. Afternoon	Day of the Year
			h. m.	m. s.	Deg	h. m.	h. m.	h. m.	Deg	h. m.		h. m.	h. m.	
1	M	Pheas. sht. beg.	6 1	10 21	35¼	5 40	5 41	11 43	37¼	4 44	19	1 20	1 38	274
2	Tu	L. Univ. op. 1828	6 3	10 40	35	5 38	6 7	Morning.	42	5 58	20	1 55	2 15	275
3	W	*Old St. Matthew*	6 5	10 58	34½	5 35	6 35	0 33	46½	7 11	21	2 35	2 50	276
4	Th	Alpha Lyræ souths 5h 39m. P M.	6 7	11 17	34	5 32	7 6	1 25	50½	8 28	C	3 10	3 30	277
5	F	[lippe born, 1773	6 9	11 34	33¾	5 29	7 41	2 19	53¾	9 43	23	3 45	4 5	278
6	S	*Faith.* Louis Phi.	6 10	11 52	33¼	5 27	8 23	3 14	56	10 57	24	4 25	4 45	279
7	S	18TH S. aft TRIN.	6 12	12 9	33	5 24	9 13	4 12	56¾	Afternoon	25	5 10	5 30	280
8	M	Beta Lyræ souths 5h. 35m. P M.	6 14	12 26	32½	5 22	10 11	5 10	56½	1 8	26	5 55	6 20	281
9	Tu	*St. Denys* [beg.	6 16	12 42	32¼	5 20	11 16	6 8	54¾	2 0	27	6 50	7 20	282
10	W	Oxf. and Cam. T.	6 17	12 58	31¾	5 18	Morning.	7 5	52	2 45	28	7 55	8 40	283
11	Th	Old Michael. Day	6 19	13 13	31½	5 15	0 27	8 0	48½	3 21	29	9 25	10 10	284
12	F	Gamma Aquilæ souths at 6h. 14m P M.	6 20	13 28	31	5 13	1 39	8 52	44¼	3 52	○	10 55	11 30	285
13	S	Trans. K. Ed. Con.	6 22	13 42	30¾	5 10	2 52	9 42	40	4 20	1	No Tide.	0 1	286
14	S	19TH S. aft TRIN.	6 24	13 56	30¼	5 8	4 4	10 31	35½	4 47	2	0 25	0 50	287
15	M	[by Fire, 1834	6 25	14 9	30	5 6	5 14	11 18	—	5 12	3	1 15	1 35	288
16	Tu	Houses Parl. des.	6 27	14 22	29½	5 4	6 23	Afternoon	31¼	5 36	4	1 55	2 15	289
17	W	*Etheldreda*	6 28	14 34	29¼	5 2	7 31	0 51	28¼	6 3	5	2 35	2 50	290
18	Th	*St. Luke*	6 30	14 45	28¾	5 0	8 37	1 37	24	6 31	6	3 5	3 25	291
19	F	[1827	6 31	14 56	28½	4 58	9 40	2 24	22¼	7 3	7	3 40	4 0	292
20	S	Bat. of Navarino,	6 32	15 6	28	4 56	10 39	3 11	19½	7 39	8	4 15	4 30	293
21	S	20TH S. aft. TRI-	6 34	15 16	27¾	4 54	11 35	3 59	18½	8 22	9	4 45	5 0	294
22	M	NITY. Battle of Trafalgar, 1805	6 36	15 25	27½	4 52	Afternoon	4 46	18½	9 9	10	5 20	5 40	295
23	Tu	Alpha Aquilæ souths 5h. 35m P M.	6 38	15 33	27	4 50	1 7	5 34	19¼	10 2	11	5 58	6 20	296
24	W	Beta Aquilæ souths 5h 35m. P.M.	6 40	15 41	26¾	4 47	1 45	6 21	20¾	11 2	12	6 45	7 10	297
25	Th	*St. Crispin*	6 42	15 48	26¼	4 45	2 18	7 8	23½	Morning.	13	7 45	8 30	298
26	F	Alpha Cygni souths 6h. 16m. P M	6 44	15 54	26	4 43	2 47	7 55	26¾	0 5	14	9 10	9 50	299
27	S	Alpha Pegasi souths 8h 33m. P.M	6 46	15 59	25¾	4 41	3 16	8 43	30½	1 11	15	10 27	11 0	300
28	S	21ST S. aft TRIN.	6 48	16 4	25¼	4 39	3 40	9 31	34¾	2 20	16	11 35	11 59	301
29	M	*St. Simon* and *St. Jude*	6 50	16 8	25	4 37	4 5	10 20	39½	3 32	17	No Tide.	0 23	302
30	Tu	Fomalhaut souths 8h. 12m. P.M.	6 51	16 11	24¾	4 36	4 34	11 12	45¼	4 47	18	0 45	1 6	303
31	W	Allhallows Eve	6 53	16 14	24¼	4 34	5 3	Morning.	48¾	6 4	19	1 25	1 44	304

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 2h. 4h. 5h. | After Sunset. O'Clock. 7h. 8h. 10h.

OCTOBER.

The Sun is in the sign Libra till the 24th, on which day, at 0h. 16m. P.M., he enters the sign Scorpio (the Scorpion). On the 1st, he is 95,028,000 miles from the Earth.

On the 1st he rises 5° S. of E.; on the 11th, at E. by S.; and on the 31st, at E.S.E. He sets, on the 1st, at 5°½ S. of W.; on the 11th, at ½° S. of W. by S.; and on the 31st, at ¼° S. of W.S.W. points of the horizon. His time of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The Moon is in the constellations Pisces and Cetus alternately till the 5th; in that of Taurus, on the 6th and 7th; in Gemini, on the 8th and 9th; in Cancer, on the 10th; in Leo, on the 11th, 12th, and 13th; in Virgo, from the 14th to the 16th; in Libra, on the 17th and 18th; in Ophiuchus, on the 19th, 20th, and 21st; in Sagittarius, on the 22nd and 23rd; in Capricornus, on the 24th; in Aquarius, on the 25th, 26th, and 27th; and in those of Pisces and Cetus alternately, till the end of the month.

She *rises*, on the 1st, at the same time as the Sun sets; from the 2nd to the 16th, during the night; from the 17th to the 30th, during the day; and at 29m. after the Sun sets on the 31st. She *sets* before the Sun rises on the 1st and 2nd; during the day, from the 3rd to the 17th; as the Sun sets, on the 18th; and during the night, from the 19th.

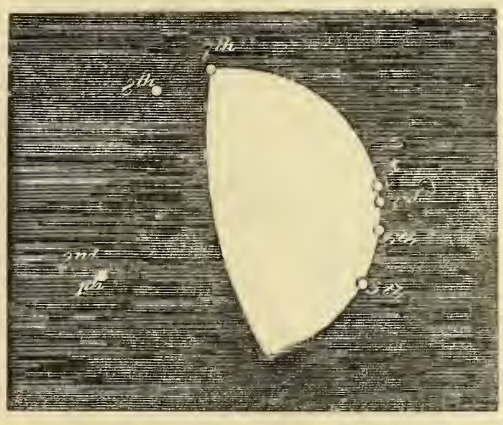
She is on the Equator the 2nd, the 14th, and the 29th. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Saturn on the 1st; Uranus, on the 2nd; Mars, on the 7th; Jupiter, on the 18th; Venus, on the 13th; Mercury, on the 17th; Saturn, on the 29th; and Uranus, on the 30th.

She is full on the 2nd, new on the 16th, and full a second time on the 31st; but without an Eclipse at these times.

She occupies nearly the same place in the heavens during the night, which is common to the 5th and 6th, as she did on September 8th, and occults several stars. The Moon at the time is 19 days old; and the form of her illuminated portion is that called gibbous. The disappearances occur at the bright limb, and the re-appearances of the stars take place at the dark limb, at the places shown in the annexed diagram.

OCCULTATIONS OF STARS BY THE MOON, OCTOBER 5 AND 6.



48 Tauri	will disappear at the place marked	D H. M. 1 at 5 11 38 P.M.	and re-appear at the place marked	D. H. M. 2 at 6 0 42 A.M.
Gamma Tauri	„	3 at 6 1 40 A.M.	„	4 at 6 2 53 „
Theta 1 Tauri	„	5 at 6 6 24 „	„	8 at 6 7 28 „
Theta 2 Tauri	„	6 at 6 6 30 „	„	7 at 6 7 24 „

The star Aldebaran will be near the Moon at the time of the latter occultations.

Mercury is in the constellation Virgo till the 6th; in that of Libra, from the 7th to the 18th; and in that of Virgo, from the 19th.

He is an evening star till the 15th, and a morning star from the 25th. He sets on the 1st at 24m., and on the 20th at 4m., after the Sun sets. He rises on the 22nd at 1m., and on the 31st at 18m., before the Sun. He is not well situated for observation. He rises, on the 1st, at 2°¼ S. of E.S.E.; on the 12th, at 6°½ S. of E.S.E.; on the 23rd, at the E.S.E.; and on the 31st, at 2°¼ S. of E. by S. He sets near the W.S.W. at the beginning of the month. He is moving eastward among the stars till the 11th; is stationary among them on the 12th and 13th; and is moving westward from the 14th to the 31st. He is near the Moon on the 17th, and is in inferior conjunction with the Sun on the 24th.

Venus is in the constellation Leo till the 16th; and in that of Virgo from the 17th.

She is a morning star throughout the month; and rises, on the 1st, at 2h. 36m. A.M.; and on the last day, at 4h. 1m. A.M.; at 7° N. of E. by N., on the 1st; at the E. by N., on the 12th; and at the E. points of the horizon, on the 27th. She is moving eastward among the stars throughout the month. She is in perihelion on the 21st; is near the Moon on the 13th, and Jupiter on the 9th: therefore, at this time, she occupies that position in the heavens, relative to the two stars Regulus and Beta Leonis, that Jupiter does on October 9, in the diagram shewing the path of Jupiter this month, and inserted in the month of December.

Mars is in the constellation Taurus on the 1st; and in Gemini from the 2nd till the end of the month. He is visible throughout the greater part of the night; and rises, on the 1st, at 8h. 5m. P.M.; and on the last day, at 7h. 25m. P.M.: at 3°¾ N. of N.E. by N., on the 1st; and at 6° N. of N.E. by N., on the last day. His times of southing are given below; his altitude above the horizon when he souths, on the 1st day, is 61°¾; and on the last day, is 62°¾. He sets at about 1h. P.M. He is moving slowly eastward among the stars, and is nearly stationary among them at the end of the month, as shewn in the diagram inserted in December, which is in continuation of that in August. He is near the Moon on the 7th.

Jupiter is in the constellation Leo throughout the month.

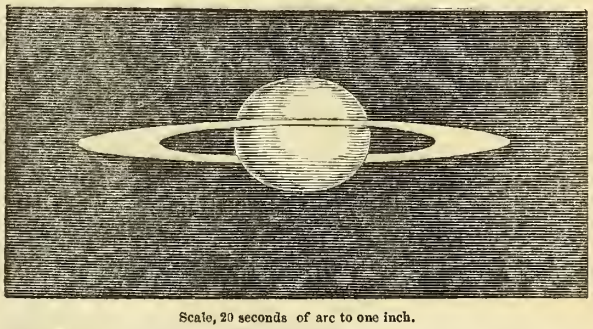
He is a morning star; and rises at 3h. 24m. A.M., on the 1st, at 2° N. of E. by N.; on the 20th, at 2h. 31m. A.M., at E. by N.; and on the last day, at 1h. 58m. A.M., at 1°¼ S. of E. by N. He is moving eastward among the stars; and is near Venus on the 9th, and the Moon on the 13th. See his path among the stars this month in the diagram in December.

Jupiter's Satellites.—The Immersions of the 1st take place at the distance of less than one-half, and those of the 2nd at about one-half of the diameter from the Planet, to the right as seen in a non-inverting telescope, and to the left as seen through an inverting telescope.

Saturn is in the constellation Cetus throughout the month.

He is visible throughout the greater part of the night; and rises a little S. of E., on the 1st, at 5h. 38m. P.M.; on the 15th, at 4h. 41m. P.M.; and on the last day, at 3h. 36m. P.M. His altitude at the time of southing, on the 1st day, is 39°¼, increasing gradually to 40° on the last day. He moves slowly westward among the stars; and is near the Moon on the 1st, and again on the 29th. His ring is now opened a little; and the following is his telescopic appearance this month.

TELESCOPIC APPEARANCE OF SATURN IN THE MONTH OF OCTOBER, 1849.



Scale, 20 seconds of arc to one inch.

Uranus rises about 3° N. of E. by N., on the 1st, at 6h. 4m. P.M.; and on the last day, at 4h. 5m. P.M. He souths on the 15th, at 11h. 54m. P.M., at an altitude of 47°. He moves slowly westward among the stars; and is near the Moon on the 3rd, and again on the 30th. He is in opposition to the Sun on the 17th.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Morning.	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.
1	1 22	9 38	5 9	10 11	11 37
6	1 17	9 41	4 58	9 55	11 16
11	1 6	9 44	4 46	9 39	10 55
16	0 44	9 47	4 33	9 23	10 34
21	0 10	9 50	4 19	9 7	10 13
26	Morn.	9 53	4 4	8 50	9 52
31	10 55	9 56	3 47	8 34	9 32

JUPITER'S SATELLITES.

Eclipses of 1st. Sat. Immersion.	Eclipses of 2nd. Sat. Immersion.
D. H. M.	D. H. M.
19 5 19 A.M.	13 4 40 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
115 Tauri	5½	7 5 49 A.M.	Bright
		7 6 42 A.M.	Dark
27 Piscium	5	28 4 2 P.M.	Dark
		28 5 1 P.M.	Bright
29 Piscium	5	28 5 58 P.M.	Dark
		28 6 54 P.M.	Bright
A star in Arietis	4	31 6 28 P.M.	Bright
		31 7 24 P.M.	Bright

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

		Days of the Month.
Full Moon	2D. 5H. 33M. P.M.	1
Last Quarter	9 0 44 A.M.	6
New Moon	16 5 13 P.M.	11
First Quarter	24 7 4 A.M.	16
Full Moon	31 4 47 P.M.	21
Perigee	6 10 0 A.M.	26
Apogee	22 3 0 A.M.	

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination South.	Uranus. Right Ascension	Uranus. Declination North.
14h. 2m	15° 31′	10h. 18m	11° 22′	5h. 49m	23° 17′	10h. 51m	8° 22′	0h. 20m	0° 45′	1h. 33m	9° 6′
14 17	17 12	10 41	9 22	5 57	23 27	10 55	8 0	0 18	0 54	1 33	9 2
14 26	17 59	11 4	7 15	6 5	23 36	10 58	7 38	0 17	1 3	1 32	8 57
14 23	17 25	11 27	5 2	6 11	23 45	11 2	7 16	0 16	1 11	1 31	8 53
14 9	15 3	11 50	2 45	6 17	23 54	11 5	6 55	0 14	1 19	1 30	8 49
13 47	11 23	12 12	0 24	6 21	24 4	11 9	6 35	0 13	1 26	1 30	8 44

OCTOBER.—NUTTING IN THE WOODS.

Oft wandering by the woodland side
You hear the distant laughter sound;
Or see the snow-white kirtles glide
Where the green hazels most abound:
All merry, noisy, nutters they,
Who through the tangling forests stray.—*The Country.*

All the wood-nuts gathered before the commencement of this month are worthless, when compared with those that still hang upon the hazels. Like ripe acorns, a jerk of the branch sends them dancing out of their vandyked cups, and they come tumbling down upon the moss, or silky forest-grass, like large dark brown beads, every one ripe, and almost ready to burst out of its shell, while each kernel is covered with a rich russet cloak.

As I last year entered, somewhat lengthily, into our country nutting excursions, I need only refer to the present engraving as illustrative of a scene before described. I have before dwelt upon the solemn associations awakened by the close of autumn. For although all its varied hues are beautiful to look upon, still it is a melancholy sight to witness the falling leaves; to see all that rendered summer so green and lovely, unhoused—drifted from their shady dwelling-places, leaving their old homes behind, naked and desolate; and wandering, as it were, houseless along the brown highways, over the wet and withered grass, or lying down to die in the wayside ditches. Who can walk abroad at such a season, without thinking of that change which must, in the end, take place—without turning our thoughts to those who have gone before us, like companions who but set out earlier in the day, and gained the inn where we must all sleep, and retired to rest before we arrived?

In my "Year Book" I have described a forest scene, familiar to me from the days of my childhood; and as a railway is overthrowing these old wild-wood fastnesses, I shall transfer this picture of a spot that had stood unaltered for centuries, to the descriptive pages of this Almanack, conscious that I should but weaken my word-painting were I to alter my first sketch.

Acres of huge gorse bushes stretched to the very verge of this wild forest-land, many of them standing higher than the head of a tall man; while upon the edge of the woodland grew thousands of wild brambles, that had trailed over the low bushes, and formed a broad impenetrable hedge, so wide that several waggons, could the underwood have borne the weight, might have been driven over them abreast. This waste had never been cultivated since the dawning of creation. For miles around, there was no vestige of the hand of man. Here grew hawthorns so huge, old, grey, and weather-beaten, that they looked as if a score

of stems had been twisted into one, and become so hardened by time, that you might fancy they were bars of iron fused together so closely, that neither storm nor thunder had been able to rend them. Here and there uprose giant crab-trees, their gnarled and knotted stems overgrown with green and yellow moss, and long flaky lichens, which hung like ragged drapery from the boughs. Even the sun-stained fruit, when mellowed by the mists of October, was sour as vinegar. Some of the trunks were hollow and decayed; and looked like strange skeletons that had lived at a remote period of time, when man was not, so white, bleached, and monstrous were their forms; and from the decayed centre had, in some places, sprung up another tree, that waved green above the old desolation. Scattered at picturesque distances, we saw immense oaks, whose shadows stretched far and wide, and struck the mind with wonder, to behold such gigantic arms spread out with no other support than the iron body from which they sprung; while, to pace the length of a single bough, seemed like treading a long gallery. Many of these had, centuries ago, been struck by the thunder-bolt, or blackened by the red-armed lightning; yet lived on, in spite of the blaze which had burnt their branches and singed their ancient heads—standing like monuments that marked some old world which had, undated ages ago, passed away, and left the skeletons of those mighty giants to proclaim the hulk and vastness of that unrecorded era. And all around this wild and wooded wilderness of hoary trees, there extended a pathless waste of entangling underwood where the hazel and the hawthorn, the black bullace, and the armed sloe were blended, and matted, and twisted with the holly and the bramble and the prickly gorse; while the woodbine climbed high over all, and, like a lady from her turret, looked out upon the wild and silent scene. It was only where the red fox, or the badger, or the daring hunter had forced a passage, that we were able to make our way along this bushy barrier. It recalled those graphic lines of Chaucer's, of a forest,

> In which there dwelleth neither man nor beast,
> With knotty, knurry, barren trees old,
> Of stubby shape, and hideous to behold.

Above this vast covert of crooked branches, and spiked bushes, and trailing briars which seemed to have been struggling for ages for the mastery, there hovered scores of birds of prey—hawks of every species, dusky ravens, and horned owls that stared upon us from out the hollow trees at noon-day, and went sailing across the wild underwood, and between the ancient branches of the trees, like winged ghosts. And ever from the tangled thicket started some wild animal, the huge fox, or the grey badger, the savage wild cat and the climbing marten; and we sometimes disturbed the stoat as he fed upon a young hare, or drove the weasel from his banquet, and picked up the ringdove, warm and bleeding, that he was feeding upon; or saw the fierce eyes of the polecat glaring upon us, as if wondering why we had disturbed his solitary dominions. Great hairy bats went gliding by in the twilight, with their leathern wings outspread; and black water-rats made a hollow sound, as they plunged into the forest brook, and were soon lost in the dark water, or among the black and rotten leaves.

As I painted the same scene in verse, in my youthful years, I here present my readers with the other picture.

> Majestic grandeur stamp'd that solemn scene.
> For weary miles an outstretch'd forest lay,
> But seldom trod by aught of mortal mien.
> Here nature sat enthroned in wild array,
> Profusely deck'd with thorns and witching bay.
> Here broad oaks threw afar their shady arms
> O'er creeping brambles that did wildly stray
> Around the trunks, where dark-leaved ivy swarms
> And none the ruddy squirrel 'mid its play alarms.
>
> The sullen crab-tree flourish'd 'neath the beech:
> Above, the sable pine did rear its head,
> As if the silver clouds it fain would reach
> So high those dark and branchy boughs were spread
> The rattling cones wild winds profusely shed:
> Luxuriant box stood robed in gloomy hue,
> And cypress nodded o'er the glen's dark bed,
> Where stately ash o'ertopp'd the bow-famed yew—
> All burst in silent grandeur on th' astonish'd view.
>
> The glens and glades, and dells were sprinkled round
> With healing herbs and variegated flowers,
> No bell or bud of which a lordling own'd;
> No studied art bedeck'd those native bowers:
> There nature's rugged breast bared to the showers,
> Bore in its solitude the roses' bloom;
> Where high the woodbines rear their painted towers,
> There unseen violets 'mid the forest gloom
> Blossom and die, and blow again above the tomb.
>
> No habitation graced that rugged scene,
> No pathway bore the track of man or steed;
> Dark trees those dells from scorching sunbeams screen,
> Where sharp-beak'd hawks and speckled songsters feed,
> And diving otters shake the tufted reed.
> No cultivation here smooth'd nature's face;
> Nor waving corn, nor hedge-engirded mead,
> Across this savage scene the eye could trace:
> It stood as when the Cymri here did lead the chase.

It has no doubt struck many, during an autumn ramble, how slowly and almost imperceptibly the changes of the months take place. The seasons themselves are striking enough, but to watch the slow progress by which they reach the different land-marks of the year, is like tracing the movement of the hand of a watch around the dial's face. Take a home garden, for instance—the smaller the better for observation—and recal the time when the first scarlet runner, nasturtium, sweet pea, or convolvulus sprang up, each a tiny speck of green above the mould. For days and days you can scarcely perceive them increase; the two little leaves grow larger by degrees; and then other tiny buds shoot out; and you are lost, between noting the expansion of the first, and the slow advance of the latter. Time rolls on, and they begin to twine and flower, one here, another there; you marvel why the one is so early, and the other so late. The first flowers attract your attention the most, and when the whole row is hung with bloom, you are anxious to find the first pod. It is the many stages through which vegetation passes that confuse observation, that induce us to take so little note of time, that causes autumn to steal upon us almost unawares. It is the same with the lengthening and shortening of the days: we see the hours, and not the minutes—the rock, but not the coral insect that was instrumental in raising it.

Nor less wonderful is the departure of the birds—which we find alluded to in the Old Testament—a proof that the habits of these winged voyagers were the same three thousand years ago. For in the Book of Jeremiah it is written, that "The stork in the heavens knoweth her appointed times: and the turtle, and the crane, and the swallow observe the time of their coming." In Mr. Couch's interesting work on Animal Instinct, of which I have, more than once, made favourable mention, I find the following original observations on the migration of birds.:—"The time of the withdrawal of the swallows and martens is more irregular than that of their coming. and begins with the swift, which usually takes its flight in the first or second week of August—the whole colony disappearing at once—the actual departure being preceded, for a few days, by exercises in flying, which seem to be practising in sport what they soon expect seriously to execute. They may be witnessed ascending in a spiral manner, and in very close phalanx, with even more than their usual rapidity, to a very great height; and having two or three times executed this movement, they suddenly sink down to their nests, after which, till the next day, they are no more to be seen. A remark often made—that the swallow tribe go away earliest in the warmest seasons—appears to be correct; but whether there be any physiological reason for this, is a matter of doubt. The principal cause of their early readiness for migration seems to be, that less interruption has been thrown in the way of the formation of the nest; and that there has been a greater abundance of insect food for the support of the young, which has accelerated their growth. In an unfavourable season in these respects, or when other causes have occurred to retard the maturity of the brood, the birds have not only been kept later, but in many instances the migratory instinct has grown sufficiently strong to overcome the force of parental affection, and the brood has been left to perish in the nest. To attend on a helpless young one, a single swift has been known to remain for a fortnight after the departure of its companions; and it is a frequent occurrence for the swallow to leave its brood to perish in the nest. As autumn approaches the swallows return to their nests, only for the sake of sleep, or as a convenient resting-place; and about the middle of September, after having shown their social disposition by assembling in companies, the earliest of them enter upon their autumnal migration, for which the proper season is the month of October. The flight to their winter's destination is less direct than their coming; so that it is not uncommon for small parties to appear again, long after they have seemed to have left us. Such is frequently the case in November."

> The golden woodpecker laughs loud no more;
> The pye no longer prates; no longer scolds
> The saucy jay. Who sees the goldfinch now
> The feather'd groundsel pluck, or hears him sing
> In bower of apple blossoms perch'd? Who sees
> The chimney-haunting swallow skim the pool,
> And quaintly dip, or hears his early song
> Twitter'd to dawning day. All, all are hush'd.—HURDIS.

I have before pointed out the beautiful days that often come with the close of October: the fine blue middle-tint that hangs over the landscape is never seen to greater perfection in England than at this season of the year, when the weather is settled.

Those who love to ramble in the country will find as much amusement and instruction now, as they did in the midst of summer. For many a lovely nook, then hidden by masses of foliage, will now break in new beauty upon the eye. Weeds and flowers have run into seed; and great is the variety of forms they have assumed in this new stage of existence. Urn, and cup, and bell, and hall, and vessels of almost every shape, stand laden with the flowers of another summer; and but wait for the strong winds to blow open the doors of their garners, that they may scatter their seeds upon the earth. But these will soon pass away, and then, instead of the faded foliage of autumn, we shall see the hedges shorn of their withered leaves, and all bare and naked, saving where they are hung with hips and haws, or where the bright holly and the dark-leaved ivy throw over them a patch of green. We shall soon hear the wind howling about the house at night, like a hungry wolf, and trying the doors and window shutters, as if determined to enter; but finding no way there, getting into the chimney, and there bellowing, and moaning, and growling, as if it stuck fast. And while we listen to such sounds, we shall recal the darkness that reigns over the sea: the ships that are driven like autumn leaves before the mighty storm, of shoals, and sand, and wrecks, and huge promontories lashed by the mountainous waves, that roll away, and go moaning along the beaten beach, as if hungry for their prey. We shall think of desolate moors, and lonely roads, and solitary toll-gates that stand on the edges of treeless commons, or between the wild sweep of lonesome woods where groaning branches ever utter deep dolorous sounds, as if moaning for very pain—places where travellers have been way-laid, and where gibbet-posts stand, whose irons ever swing and creak. Spots that have—

> A weird-like and eiroy look,
> As, if murder lurked anywhere, there it would be:
> Ruinous, shadowy, fearsome, and lone,
> Abounding with whispers that seem not its own,
> Where sounds, not of earth, shake each grey old ash tree.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Afternoon.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon	Day of the Year.
			H. M.	M S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	Th	*All Saints*	6 56	16 16	24	4 32	5 37	0 6	52½	7 23	16	2 5	2 24	305
2	F	*All Souls.* Mich.	6 56	16 17	23¾	4 31	6 17	1 3	55½	8 40	17	2 44	3 5	306
3	S	Term begins. [NITY	6 59	16 17	23½	4 29	7 6	2 2	57¾	9 55	18	3 25	3 45	307
4	S	22ND S. aft. TRI-	7 1	16 16	23	4 27	8 3	3 2	57	11 1	19	4 10	4 30	308
5	M	Gunpowder Plot	7 2	16 14	22¾	4 26	9 8	4 2	55¾	11 59	20	4 55	5 15	309
6	Tu	*St. Leonard*	7 4	16 12	22½	4 24	10 18	5 1	53¼	Afternoon	21	5 40	6 10	310
7	W	Fomalhaut souths 7h. 42m P.M.	7 6	16 8	22¼	4 23	11 30	5 58	49¾	1 25	C	6 35	7 10	311
8	Th	Alpha Pegasi souths 7h. 46m P.M. [1841	7 7	16 4	22	4 22	Morning.	6 50	45¾	1 57	23	7 45	8 27	312
9	F	P. of Wales born	7 9	15 59	21½	4 20	0 42	7 40	41½	2 27	24	9 10	9 50	313
10	S	Alpha Pegasi souths 7h. 37m. P.M.	7 10	15 53	21¼	4 19	1 53	8 28	37¼	2 52	25	10 30	11 10	314
11	S	23RD S. aft. TRIN.	7 12	15 47	21	4 18	3 2	9 15	32¾	3 15	26	11 40	No Tide.	315
12	M	Camb. Term div.	7 14	15 39	20¾	4 16	4 11	10 0	28¾	3 40	27	0 5	0 30	316
13	Tu	*Britius*	7 16	15 30	20½	4 14	5 19	10 46	25¾	4 5	28	0 53	1 15	317
14	W	Alpha Andromedæ souths 8h 24m. P.M.	7 18	15 21	20¼	4 12	6 25	11 32	22¼	4 32	○	1 35	1 50	318
15	Th	*Machutus*	7 20	15 11	20	4 11	7 29	Afternoon	19	5 1	1	2 10	2 30	319
16	F	Polaris souths 9h. 21m. P.M.	7 22	15 0	19¾	4 10	8 30	1 5	18¾	5 35	2	2 45	3 0	320
17	S	Hugh Bp. of Lin.	7 23	14 48	19½	4 9	9 28	1 53	18¼	6 16	3	3 20	3 35	321
18	S	24TH S. aft. TRIN.	7 25	14 35	19¼	4 8	10 19	2 40	18½	7 1	4	3 50	4 7	322
19	M	Ed. King & Mar.	7 27	14 22	19	4 7	11 5	3 28	19¾	7 52	5	4 20	4 40	323
20	Tu	Princess Royal b.	7 28	14 8	18¾	4 6	11 46	4 15	22	8 49	6	4 55	5 15	324
21	W	*St. Cecilia*	7 30	13 52	18½	4 5	Afternoon	5 2	24¾	9 50	7	5 35	5 55	325
22	Th	*St. Clement.* Old	7 31	13 37	18¼	4 3	0 50	5 48	28½	10 54	8	6 18	6 40	326
23	F	Martinmas Day	7 33	13 20	18¼	4 2	1 16	6 34	32½	Midnight.	●	7 5	7 40	327
24	S	25TH. S. aft. TRIN	7 35	13 3	18	4 0	1 42	7 20	37	Morning.	10	8 15	8 55	328
25	S	Mich. Term ends.	7 36	12 44	17¾	3 58	2 8	8 8	41¾	1 9	11	9 28	10 5	329
26	M	Princess Mary Adelaide born, 1833.	7 38	12 26	17¼	3 57	2 23	8 57	46½	2 21	12	10 35	11 10	330
27	Tu		7 39	12 6	17	3 56	3 0	9 49	50¾	3 34	13	11 40	No Tide.	331
28	W	Alpha Arietis souths 9h. 27m. P.M.	7 40	11 46	17¼	3 55	3 30	10 45	54¼	4 52	14	0 5	0 30	332
29	Th	Gamma Pegasi souths 7h. 30m. P.M.	7 42	11 25	17	3 54	4 6	11 43	56½	6 12	15	0 50	1 15	333
30	F	*St. Andrew*	7 44	11 3	16¾	3 54	4 53	Morning.	57¼	7 29	●	1 40	2 0	334

DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h. After Sunset. O'Clock. 6h. 8h. 10h.

NOVEMBER.

The Sun is in the sign Scorpio till the 22nd, on which day, at 8h. 53m. A.M., he enters the sign Sagittarius (the Archer).

On the 1st, he is 94,213,000 miles from the Earth. He rises on the 1st, $\frac{7}{4}$° S. of E.S.E.; and on the 26th at the S.E. by E.; he sets on the 1st, at 1° S. of W.S. W., and on the 26th, at the S.W. by W. points of the horizon. His time of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The Moon is in the constellation Taurus till the 3rd; in Gemini, on the 4th and 5th; in Cancer, on the 6th; in Leo, on the 7th, 8th, and 9th; in Virgo, from the 10th to the 13th; in Libra on the 14th and 15th; in Ophiuchus, on the 16th and 17th; in Sagittarius, on the 18th and 19th; in Capricornus, on the 20th; in Aquarius, on the 21st, 22nd, and 23rd; in Pisces and Cetus alternately, till the 28th; and in Taurus, till the end of the month.

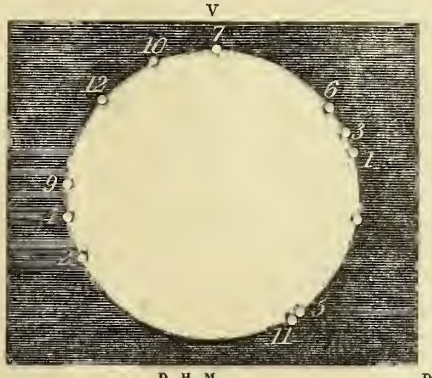
She rises after the Sun sets, and before he rises, or during the night, till the 14th; during the day, from the 15th to the 28th; and shortly after sunset, on the 29th and 30th. She sets during the day till the 13th, and during the night from the 14th.

She is on the Equator on the 11th and on the 25th. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

She is near Mars on the 4th; Jupiter, on the 9th; Venus, on the 12th; Mercury, on the 13th; Saturn, on the 25th; and Uranus, at midnight on the 26th. She is new on the 14th, and full on the 30th; but without an Eclipse at both times.

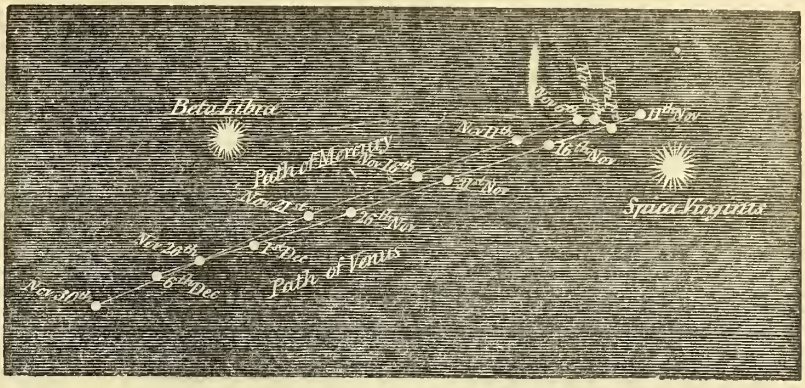
She occults several stars during the night, common to the 29th and 30th, and among them Aldebaran. She is full, and therefore both the disappearances and re-appearances take place at the bright edge of the limb, at the places shown in the annexed diagram in which V indicates the highest point of the Moon at the time of the occurrence of each phenomenon.

OCCULTATIONS OF STARS BY THE MOON, NOVEMBER 29 AND 30.



	D. H. M.		D. H. M.
48 Tauri	will disappear at the place marked	1 at 29 6 2 P.M.	and re-appear at the place marked — 2 at 29 6 57 P.M.
Gamma Tauri	"	3 at 29 7 43 "	" 4 at 29 8 46 "
75 Tanri	"	5 at 30 0 12 A.M.	" 9 at 30 1 12 A.M.
Theta 1 Tauri	"	6 at 30 0 18 "	" 7 at 30 0 52 "
A star in Taurus	"	8 at 30 1 8 "	" 10 at 30 2 11 "
Aldebaran	"	11 at 30 3 43 "	" 12 at 30 4 42 "

PATHS OF MERCURY AND VENUS, DURING THE MONTH OF NOVEMBER, 1849, WITH RESPECT TO THE FIXED STARS.



Scale, 12 degrees to one inch

Mercury is in the constellation Virgo till the 16th; and in that of Libra, from the 17th.

He is a morning star; and rises on the 1st, at 1h. 27m.; on the 7th, at 1h. 55m., on the 8th, at 1h. 54m.; on the 15th, at 1h. 48m.; and on the 30th, at 59m. before the Sun rises. He is favourably situated for observation throughout the month. He rises on the 1st, at 1°$\frac{1}{2}$ S. of E. by S.; on the 20th, at E.S.E.; and on the 30th, at 8°$\frac{1}{4}$ S. of E.S.E. He is near the Moon on the 9th; and is at his greatest west elongation on the same day. His path among the stars is shown in the annexed diagram.

Venus is in the constellation Virgo till the 22nd; and in that of Libra, from the 23rd.

She is a morning star throughout the month; and rises on the 1st, at 4h. 5m. A.M.; and on the last day at 5h. 33m. A.M.; at 4° S. of E. on the 1st; at E. by S. on the 11th; and at E.S.E. on the 27th. She is moving eastward among the stars throughout the month; is near the Moon on the 12th. Her path among the stars during the month is shown in the preceding diagram.

Mars is in the constellation Gemini throughout the month.

He is visible throughout the night; and rises on the 1st, at 7h. 21m. P.M.; and on the last day, at 5h. 4m. P.M.; at 6° N. of N.E. by N. on the 1st; and at 7°$\frac{3}{4}$ N. of N.E. by N. on the 30th. His times of southing are given below; and his altitude above the horizon when he souths, on the 1st, is 62°$\frac{3}{4}$; and on the last day, is 64°$\frac{1}{4}$. He sets at about 11$\frac{1}{2}$m. A.M. He is stationary among the stars till the 16th; and is moving slowly westward from the 17th to the end of the month, as is shown in the diagram in December; and is near the Moon on the 4th.

Jupiter is in the constellation Leo throughout the mouth.

He is a morning star; and rises at 1h. 55m. A.M., on the 1st, at 1°$\frac{1}{4}$ S. of E. by N.; and on the last day, at 0h. 28m. A.M., at 3°$\frac{3}{4}$ S. of E. by N.; souths at an altitude of 44°$\frac{3}{4}$ on the 1st; decreasing to 43°$\frac{1}{2}$ on the last day. He is moving eastward among the stars; and is near the Moon on the 9th.

Jupiter's Satellites.—The Immersions of the 1st take place at the distance of one-half; those of the 2nd, at that of one diameter, nearly; those of the 3rd take place at the distance of one and a half, and that of the 4th at two diameters from the Planet. The Emersion of the 4th takes place at the distance of one and a half diameter, nearly. All these phenomena occur on the right of the Planet, as seen through a telescope which does not invert, and to the left as seen through an inverting telescope.

Saturn is in the constellation Cetus throughout the month.

He is an evening star, and rises between 1$\frac{1}{2}$h. and 3$\frac{1}{2}$h. P.M. He souths at an altitude of 40° on the 1st; and of 40°$\frac{1}{4}$ on the last day. He sets on the 1st, at 3h. 24m. A.M.; and on the last day, at 1h. 24m. A.M.; at a point a little S. of W. He moves slowly westward till the 15th; and is stationary among the stars during the remainder of the month.

Uranus rises about 2° N. of E. by N., on the 1st, at 4h. 0m. P.M.; souths on the 15th, at 9h. 47m. P.M., at an altitude of 47°; and he sets on the 1st, at 5h. 36m. A.M.; and on the last day, at 3h. 37m. A.M. He is moving slowly westward among the stars; and is near the Moon on the 26th.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 50	9 57	3 44	8 31	9 28
6	10 36	10 0	3 26	8 14	9 7
11	10 33	10 3	3 6	7 57	8 47
16	10 38	10 7	2 45	7 40	8 26
21	10 46	10 11	2 22	7 23	8 6
26	10 57	10 15	1 58	7 6	7 46
30	11 6	10 19	1 38	6 52	7 30

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Immersion. I.		Eclipses of 3rd Sat. Emersion. E.	
D. H. M.		D. H. M.	
4 3 35 A.M.	I.	22 2 45 A.M.	E.
11 5 28 A.M.	I.	29 3 19 A.M.	I.
27 3 43 A.M.	I.	29 6 42 A.M.	E.
2nd Sat.		4th Sat.	
14 4 11 A.M.	I.	12 4 19 A.M.	I.
		29 2 24 A.M.	E.

OCCULTATIONS OF STARS BY THE MOON.

Names of Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
		D. H. M.	
3 Cancri	6	5 11 45 P.M.	Bright
		6 0 25 A.M.	Dark
29 Capricorni	5	21 7 29 P.M.	Dark
		21 7 45 P.M.	Bright
115 Tauri	5$\frac{1}{2}$	30 9 35 P.M.	Bright
		30 10 41 P.M.	Dark

For occultation on Nov. 29, and 30, see above.

TIMES OF CHANGES OF THE MOON;

And when she is at her greatest distance (Apogee), or her least distance (Perigee), from the Earth, in each Lunation.

Last Quarter	..	7D.	8H. 23M.	A.M.
New Moon	..	14	9 13	P.M.
First Quarter	..	23	2 24	A.M.
Full Moon	..	30	3 25	A.M.
Perigee	..	2	11	P.M.
Apogee	..	18	9	P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination South.	Uranus. Right Ascension	Uranus. Declination North.
1	13h. 33m	8° 5′	12h. 39m	2° 27′	6h. 25m	24° 17′	11h. 13m	6° 11′	0h. 12m	1° 33′	1h. 29m	8° 39′
6	13 38	7 51	13 2	4 49	6 27	24 29	11 16	5 53	0 11	1 39	1 28	8 35
11	13 55	9 24	13 25	7 10	6 27	24 43	11 19	5 36	0 10	1 43	1 27	8 31
16	14 20	11 51	13 49	9 27	6 25	24 59	11 21	5 19	0 9	1 46	1 27	8 27
21	14 48	14 35	14 12	11 40	6 22	25 16	11 24	5 4	0 9	1 49	1 26	8 24
26	15 18	17 15	14 37	13 45	6 17	25 33	11 26	4 50	0 9	1 50	1 26	8 21

NOVEMBER.—GUY FAWKES DAY.

Please to remember the Fifth of November
Gunpowdor treason and plot ;
I know no reason why gunpowdor treason
Should ever be forgot.—*Old Ditty.*

November brings with it Guy Fawkes Day, which, twenty years ago, in the conntry, was a common holiday; and not to bnrn Gny at night, and spend all the money got during the day in fireworks, would in our boyish days have been considered treason by the worthy parson, churchwardens, overseers, and every other "good man and true." We had some very misty notions about Guy Fawkes and King James and King William—not that we obtained our knowledge from history so much as the Common Prayer Book, which, although it taught us to pray for our enemies, said not a word against the burning of Guy Fawkes; indeed, this we considered the most important proof of our paying "due observance" to the day. Our notions of the aforesaid Guy were also very peculiar. We believed him to have been a very ugly sort of a fellow, with a long red nose, who levied blackmail, in his day, by being carried about from house to honse, with a lanthorn in one hand, a match in the other, and we knew not how many pounds of gnnpowder in his pockets; and that people gave him money to prevent him from blowing up their houses; further, that he at last grew so bold as to beg of Parliament, which was, in itself, a not very uncommon act; that they either refused to relieve him on the spot, or to grant him a pension; and that he threatened to serve King, Lords, and Commons, as he had threatened to serve all other liege subjects, and at last became so overbearing that all London rose np against him as one man; that he was banished the kingdom, and then bnrnt in effigy for having been found prowling about the vaults, into which no end of small casks had been smuggled; that some said they contained gunpowder; others that Guy knew as well as the members themselves what the concealed casks contained; and that a nose like his would never have been allured into such places had there been nothing better than gunpowder. Then the plot grew too thick for our boyish comprehension; there was something about hush-money, trap-doors, drinking-cups, honourable members slipping one after another into the aforesaid vaults, and not able to get ont again without assistance, and, finally, that they were blocked np; and in the course of time Bellamy opened, who still carries on a snug business. That the whole affair obtained the name of the Gunpowder Plot, through the train that was laid to get at the barrels and quench the spark which the dry orations of King James created in every throat. As to the story about burning, torturing, and so on, of course we knew better than to believe a word about the matter—well aware that in a Christian country, like England, such brutal scenes could never take place. Having thus settled these "Historic Doubts" to our satisfaction, of course

We knew no reason why gunpowder treason
Should ever be forgot.

so at once commenced making a Guy, or sometimes stole one ready-made, which saved much trouble, for it was useless for the weaker party to offer resistance at a season when bon-fires, crackers, squibs, and powder in every form, were blazing and banging all over the country. It was a day dedicated to Invasion, and not a scarecrow could be found in the fields or gardens for miles around. Nor was this all: we established a committee of enquiry, days before this great annual firing, and they went round to see that all gates, fences, railings, posts, &c., were firmly secured, according to statute passed. They were entitled to bring away all that were loose, decayed, or broken, or could by any lawful means be torn off, up, or down. These were offered up at the shrine of Guy on the evening of the Fifth of November, and for this purpose were hoarded up in such places as the secret committee in their wisdom chose to appoint to be used for the "due observance of the day."

The best receipt we knew for making a Guy was, first to steal a coat—if a early new, so much the better, it gave Guy a more respectable look. The village tailor was generally in the secret, and he so cut, altered, and trimmed it, after having cabbaged a waistcoat out of the skirts, that we could safely defy the original owner to swear to it again, even when it had undergone the most rigid examination. A pair of good leather breeches also formed a capital accompaniment to the above, and these we generally obtained by "hook or crook." Top-boots were then pretty plentiful; and as the old shoemaker had generally five or six pairs on hand to repair, all round-toed, and as like as two cherries, it was difficult to discover whose were lost. Hats were plentiful as blackberries, as every high wind blew off one or two at the church corner, and the best was invariably selected. We just knew enough of the laws to understand that horses, waggons, &c., were in cases of emergency to be pressed into service in the King's name; and, under the same plea of loyal necessity, we stuck at nothing for the honour of our country, and the celebration of the Fifth of November. Pity 'tis, 'tis true, but sometimes a real living Guy has been detected in the fact of wearing the lost boots, unmentionables, &c., and been compelled to throw down his matches and lanthorn and run for it, and that our friends have been mulct to the full value aforesaid. But such mishaps rarely befel us.

Oh! what blazing and firing was there in those good old times: men drank and swore beautifully in those days, to prove their dislike to Popery; and what if a rocket now and then alighted upon a corn-rick, and burnt up a few scores of quarters of wheat, was it not a proof that in our very zeal we neither respected persons nor property? Then what good we did for trade, breaking every window that was not illuminated, without inquiring whether the indwellers were Catholics or Protestants!

It was one of those blessed days in which all loyal subjects who had allowed their nails to grow to a goodly length were expected to scratch, bite, shout, and blaze away at everything they came near. Alas! there are now "most biting laws" against the celebration of Guy Fawkes day. Into that very House which was all but blown up little more than two centuries ago, men of all sects and creeds are admitted; there is now no burning, no drawing, nor quartering in the name of religion; no traitors' heads grinning on London-bridge; no burning in the bars of Smithfield. Men seem to have lost that spirit of sweet savageness, and to have laid aside the charms of former cruelty. Poor Guy is himself doomed to be numbered amongst the things that were; and the time will come when the remembrance of Gunpowder Treason, and the martyrdom of Charles I., will not be found in our "Forms" of Prayer, nor be allowed to mingle with that holier incense which is alone worthy of ascending to Heaven. We shall then leave "the dead past to bury its dead," and destroy every trace of those old barriers that have so long separated man from his brother man.

As painters of the past, we have glanced at an old custom which is now fast sinking into desuetude, and which, excepting as an amusement for children, will ere long die away—a consummation devoutly to be wished.

But we must now turn to where

> Autumn rends her yellow hair,
> And weeps the more that tears were vain to save;
> The sorrowful robin sings her requiem,
> And strews her hearse with all his favourite leaves;
> The sprightly lark somewhere in silence grieves
> And will not chant his wonted matin hymn;
> And Nature, her proud mother, mourns her child
> With that unutter'd grief which is not soon beguiled.—WEBBE.

Although the close of autumn is somehow associated with the images of decay and death, there are fitful and cheerful glimmerings thrown around, "like hope upon a death-bed;" and we feel that this natural destruction of the remains of the beautiful summer is necessary for the production of another and a fairer spring. There is also something pleasant in the appearance of the well-filled rick-yards and barns; and we seem armed against the coming winter when we look upon the stores that have been gathered from field, orchard, and garden, and garnered against the time when "the wind and rain beat dark December." Nor do we seem to care so much to see the leaves rotting and the long grass withering, and the low leaden-colored sky ever raining, in these busy autumnal days, as we should in the almost nightless season of summer; the lengthened darkness brings with it the very necessity that confines us within doors.

There is something very beautiful about the great high heath-covered hills in autumn, that come dipping down with crimson-clad feet into the open valleys. Scott used to say that he could never live unless he set his foot upon the heath once a year; and we know few spots that retain their dry elasticity so long as those on which the heath-bell waves; for, when all besides is saturated with moisture and decay, these are comparatively dry. Some such spot we once knew that ran high above the surrounding woods; for, saving one narrow field-like entrance, woods encircled it every way. It had never been cultivated within the memory of man, nor probably ever had been. When the ling and heather had withered on the more open hills, here it remained as fresh as if it had but just bloomed; and even when December began to draw the curtain upon the close of the year, we have still found it as fresh as it seemed to have been in other places a month or two before.

The following humorous description of autumn was written between two and three hundred years ago, but by whom we know not, though we think it is attributed to Decker:—"Autumn's the barber of the year, that shears bushes, hedges, and trees; the ragged prodigal, that consumes all and leaves himself nothing; the arrantest beggar amongst all the four quarters; and never well, but always troubled with the falling sickness. This murderer of Spring, this thief to Summer, and bad companion to Winter, seems to come in according to his old custom, when the sun sets, like Justice, with a pair of scales in his hand, weighing no more hours to the day than he does to the night, as he did before in his vernal progress, when he rode on a ram. But this bald-pated Autumn will be seen walking up and down groves, meadows, fields, parks, and pastures, blasting of fruits, and beating leaves from their trees. When common highways shall be strown with boughs in mockery of Summer and in triumph of her death."

The resemblance the seasons bear to life, death, and resurrection, have not escaped the eyes of our old poets. They ever compared spring to youth; the blowing and blossoming of the buds and flowers to the promises of future manhood, the fruits which the full Summer would bring forth and ripen. Autumn, which brought perfection, was also the forerunner of dissolution; the same which caused the rose to shed its beauty as soon as it was attained, for such was ever Nature's course. Winter was that sleep in the grave which awoke to life in another spring, whose flowers were eternal, and where there was neither death nor change again. Even so far back as the days of Homer, we find the decay of autumn suggesting these very images, nor have we in any way been able to improve upon them. Shelley seems to have felt this when he said:—

> Oh! wild West Wind! thou breath of Autumn's being—
> Thou, from whose unseen presence the leaves dead
> Are driven, like ghosts from an enchanter fleeing,
> Yellow, and black, and pale, and hectic red—
> Pestilence-stricken multitudes. Oh! thou
> Who chariotest to their dark and wintry bed
> The winged seeds, where they lie cold and low,
> Each like a corpse within its grave, until
> Thine azure sister of the spring shall blow
> Her clarion o'er the dreaming earth, and fill
> (Driving sweet buds, like flocks, to feed in air)
> With living hues and odours plain and hill!
> Make me thy lyre even as the forest is.
> What if my leaves are falling like its own:
> The tumult of the mighty harmonies
> Will take from both a deep autumnal love,
> Sweet though in sadness! Be thou spirit-fierce.
> My spirit, be thou me, impetuous one!
> Drive my dead thoughts over the universe,
> Like wither'd leaves, to quicken a new birth.

How wild and solemn must have been the autumns in our primitive old English forests, three or four thousand years ago! when there was no human voice to cheer the solitude; but, according to the earliest records we possess, nothing but bears, wolves, and the oxen with the high prominence. The badger is another of that ancient family, which has outlived the mammoth and the mastodon; for we find his fossil remains side by side with these huge and extinct monsters. He is the only representative of our cave bear, and seems not to have bated a jot of bruin's valour. It appears that in the present day the badgers migrate from one part to another in large companies, sometimes numbering from ten to seventeen; that they move along in the night, rank and file, in seemly and marching order, placing their young ones in the centre. In one or two instances, when they have been confronted, both man and dog were compelled to beat a retreat.

The favourite haunt of the badger is the gloomy centre of a wood, or that part where the thicket is impassable; possessing long powerful claws, he there digs for himself a deep den, forming a somewhat winding and intricate entrance, into which he works his long hardy body, not caring a straw for rubbing his coarse skin against the outer brambles or rugged sides of his subterranean dwelling, so long as he has but plenty of room to turn himself when he reaches his inner chamber. Here he couches all day long, and never ventures out to feed until late in the evening, or late in the night. Though dull, heavy, and lazy, it is, upon the whole, a harmless brute, doing no injury to any one, but feeding upon roots, pig-nuts, acorns, beech-mast, and occasionally a long-tailed mouse or two, or even a few frogs or insects when nothing better may be had. Some naturalists assert that he is a great destroyer of wasps'-nests, and feeds upon the larvæ. He is, beyond doubt, the strongest jawed animal of his size in Britain, and, even when baited by half-a-dozen dogs, if he once chances to get fairly hold, woe be to the assailant. When taken young he is said to be easily tamed, and to become as attached and affectionate as a dog; ready, also, to follow his master anywhere. Glad we are that the cruel custom of badger-baiting is now abandoned. Almost every inn-yard in the country had, a few years ago, its badger-tub, or box, in which dog and badger were mutually tortured, the dog which seized the badger the oftenest, and still retained his hold each time he went in until he was drawn forth by the tail, when the badger was made to release its hold, and the dog again sent in, according to its "bottom," was the winner. The method used for capturing the badger is by placing an open sack, with a running noose, in the earth where he harbours. This is done while he is out feeding. When all is prepared, a loud hooting and whistling is made, and half a dozen dogs are also turned loose. The badger, alarmed, hurries off home, rushes into the sack that closes behind him, and is regularly "sacked."

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'clock.	SUN. Souths. Height above Horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Morning.	MOON. Souths. Height above Horizon	MOON. Sets. Morning.	Moon's Age.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		
1	S	Fomalhaut souths at 6h. 7m. P.M.	7 46	10 41	16¾	3 52	5 47	0 45	57¼	8 43	17	335
2	S	1st S. in Advt.	7 47	10 18	16½	3 52	6 50	1 47	56½	9 47	18	336
3	M	Alpha Andromedæ souths at 7h. 9m. P. M.	7 48	9 54	16¼	3 51	7 58	2 49	54¼	10 42	19	337
4	Tu	Alpha Pegasi souths 7h 10m P. M.	7 49	9 30	16¼	3 51	9 15	3 49	51¼	11 27	20	338
5	W	Polaris souths 8h 6m P.M	7 51	9 5	16¼	3 51	10 30	4 45	47½	Afternoon	21	339
6	Th	*Nicholas*	7 52	8 40	16	3 51	11 43	5 37	43¼	0 30	☾	340
7	F	Alpha Arietis souths 8h 52m P.M.	7 53	8 14	16	3 50	Morning.	6 27	38¾	0 58	23	341
8	S	*Con. of B.V. Mary*	7 55	7 47	15¾	3 50	0 54	7 14	34¼	1 23	24	342
9	S	2d S. in Advent	7 56	7 21	15¾	3 50	2 2	7 59	30	1 45	25	343
10	M	Grouse sh. ends	7 57	6 53	15½	3 49	3 10	8 45	26¼	2 9	26	344
11	Tu	Terrible slaughter	7 58	6 26	15½	3 49	4 16	9 30	23¼	2 35	27	345
12	W	of British troops in Afghanistan, 17,000 lives	7 59	5 57	15½	3 49	5 20	10 15	20¾	3 4	28	346
13	Th	*Lucy* [lost, 1842	8 0	5 29	15¼	3 49	6 22	11 2	19	3 37	29	347
14	F	Aldebaran souths 10h. 53m. P.M.	8 0	5 0	15¼	3 49	7 21	11 48	—	4 14	○	348
15	S	[Cambridge Term ends.	8 1	4 31	15¼	3 49	8 15	Afternoon	18	4 58	1	349
16	S	3d S. in Advent	8 2	4 2	15¼	3 49	9 2	1 24	18¼	5 47	2	350
17	M	Oxford T. ends	8 3	3 32	15¼	3 49	9 45	2 12	19¼	6 42	3	351
18	Tu	Capella souths 11h 15m P.M.	8 4	3 3	15	3 50	10 11	2 58	21	7 40	4	352
19	W	*Ember Week*	8 5	2 33	15	3 50	10 53	3 44	23½	8 42	5	353
20	Th	Regulus souths 11h. 9m. P.M.	8 5	2 3	15	3 51	11 21	4 30	26¾	9 47	6	354
21	F	*St. Thomas.* Winter commences	8 6	1 33	15	3 51	11 47	5 15	30¾	10 52	7	355
22	S		8 6	1 3	15	3 51	Afternoon	6 0	35	11 59	○	356
23	S	4th S in Advent	8 6	0 33	15	3 52	0 34	6 47	39½	Morning.	9	357
24	M	Christmas Eve	8 7	0 3	15	3 52	1 0	7 36	44	1 12	10	358
25	Tu	Christmas Day	8 7	After 12 o'clock	15¼	3 53	1 27	8 27	48½	2 24	11	359
26	W	*St. Stephen*	8 7	0 57	15¼	3 53	1 59	9 23	52¼	3 40	12	360
27	Th	*St. John*	8 8	1 26	15¼	3 54	2 38	10 22	55¼	4 59	13	361
28	F	*Innocents*	8 8	1 56	15¼	3 55	3 26	11 24	57	6 15	14	362
29	S	*Thomas à Beckett* killed, 1171	8 9	2 25	15¼	3 56	4 25	Morning.	57¼	7 25	●	363
30	S		8 9	2 54	15¼	3 57	5 33	0 28	55¾	8 29	16	364
31	M	*Silvester*	8 9	3 23	15½	3 58	6 48	1 31	53¼	9 21	17	365

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 2h.	4h.	6h.	Moon's Age.	After Sunset O'Clock. 6h.	8h.	10h.
			17			
			18			
			19			
			20			
			21			
			☾			
			23			
			24			
			25			
			26			
			27			
			28			
			29			
			○			
			1			
			2			
			3			
			4			
			5			
			6			
			7			
			○			
			9			
			10			
			11			
			12			
			13			
			14			
			●			
			16			
			17			

HIGH WATER AT LONDON BRIDGE. Morning. H. M.	Afternoon H. M.
2 25	2 45
3 10	3 30
3 55	4 20
4 45	5 10
5 35	6 5
6 30	7 0
7 30	8 0
8 40	9 15
9 50	10 25
11 0	11 30
At Noon.	No Tide.
0 24	0 47
1 8	1 30
1 48	2 7
2 25	2 45
3 0	3 18
3 35	3 50
4 7	4 25
4 40	5 0
5 15	5 36
5 55	6 15
6 40	7 0
7 30	8 0
8 30	9 10
9 40	10 15
10 50	11 25
11 55	No Tide.
0 20	0 47
1 15	1 40
2 5	2 30
3 0	3 25

DECEMBER.

THE SUN is in the sign Sagittarius till the 21st, at 9h. 42m., at which time he enters the sign Capricornus (the Goat), and Winter commences. On the 1st he is 93,628,000 miles from the Earth.

He rises, on the 1st, at 1°½ S. of S.E. by E.; on the 11th, at 3°¾; on the 21st, at 4°; and on the 31st, at 3°½ S. of the same point of the horizon. He sets on the same days respectively at 1°¾, at 3°½, at 4°, and at 3°½ S. of the S.W. by W. points of the horizon. His time of southing, in common clock time, and his height in degrees at the same time, are given for every day on the opposite page.

The MOON is in the constellation Gemini on the 1st and 2nd; in Cancer, on the 3rd and 4th; in Leo, on the 5th and 6th; in Virgo, from the 7th to the 10th; in Libra, on the 11th and 12th; in Ophiuchus, on the 13th and 14th; in Sagittarius, on the 15th, 16th, and 17th; in Capricornus, on the 18th; in Aquarius, on the 19th, 20th, and 21st; in Pisces and Cetus alternately, till the 25th; in Taurus, on the 26th, 27th, and 28th; in Gemini, on the 29th and 30th; and in Cancer, on the 31st.

She rises during the night till the 14th; during the day, from the 15th to the 28th; and after the Sun sets, on the 29th, 30th, and 31st. She sets during the day till the 16th; during the night, from the 17th to the 29th; and shortly after sunrise, on the 30th and 31st.

She is on the Equator on the 8th and on the 23rd. Her time of southing, in common clock time, and her height in degrees at the same time, are given for every day on the opposite page.

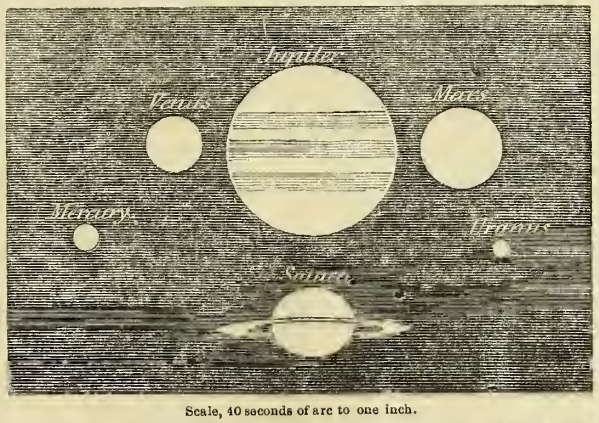
She is near Mars on the 1st; Jupiter, on the 7th; Venus, on the 12th; Mercury, on the 14th; Saturn, on the 22nd; Uranus, on the 24th; and Mars, on the 28th.

She is new on the 14th, and full on the 29th; but without an Eclipse at both times.

MERCURY is in the constellation Libra on the 1st; he is moving on the boundaries of those of Scorpio and Ophiuchus, from the 2nd to the 14th; and in that of Sagittarius from the 15th to the end of the year.

He is a morning star at the beginning, and an evening star towards the end of the month. He rises on the 1st at 56m., and on the 15th at 1m., before the Sun rises. He sets on the 16th at 2m., and on the 31st at 40m., after the Sun sets. He is generally unfavourably situated during the month for observation. He rises on the 4th at the S.E. by E.; and he sets on the last day at 5°⅔ S. of S.W. by W., points of the horizon. He is moving eastward among the stars throughout the month; and is near the Moon on the 14th, and is in superior conjunction with the Sun on the 19th.

RELATIVE TELESCOPIC APPEARANCES OF THE PLANETS, IN DECEMBER, 1849.



Scale, 40 seconds of arc to one inch.

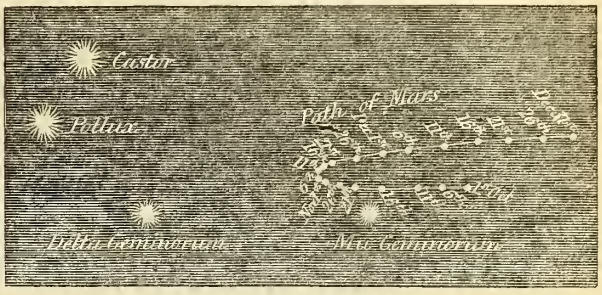
VENUS is in the constellation Libra till the 10th; in that of Scorpio, from the 11th to the 14th; and in that of Ophiuchus, from the 15th.

She is a morning star throughout the month; and rises at 5h. 37m. A.M., on the 1st; and at 7h. 3m. A.M., on the 31st; at 2°¾ S. of E S.E., on the 1st; at the S.E. by E., on the 18th; and at 3°½ S. of S.E. by E., on the 31st. She is moving eastward among the stars throughout the month; and is near the Moon on the 12th. Her telescopic appearance towards the end of the month is small, and almost circular, as is shown in the preceding cut.

MARS is in the constellation Gemini till the 10th; and in that of Taurus, from the 11th to the end of the month.

He is visible throughout the night; and rises, on the 1st, at 4h. 59m. P.M.; and on the last day, at 2h. 1m. P.M.; at 7°¾ N. of N.E. by N. on the 1st, and at 8°¾ N. of N.E. by N. on the last day. His times of southing are given below; and his altitude above the horizon when he souths, on the 1st, is 64°½, and on the last day is 65°. He sets towards the end of the month as the Sun rises. He is moving westward among the stars (as shewn in the annexed diagram); and is near the Moon on the 1st and 28th. He is in opposition to the Sun on the 18th.

PATH OF MARS, DURING THE MONTHS OF OCTOBER, NOVEMBER, AND DECEMBER, 1849.

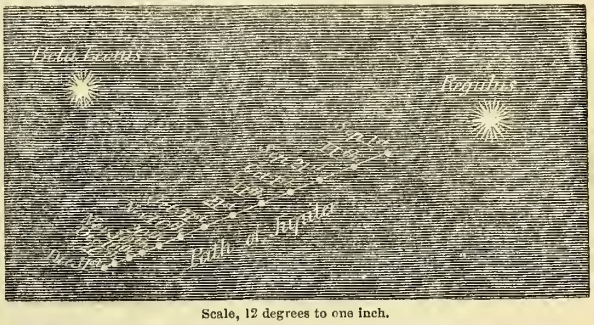


Scale, 12 degrees to one inch.

JUPITER is in the constellation Virgo throughout the month.

He is a morning star; rises at 0h. 24m. A.M., on the 1st, at 4° S. of E. by N.; and on the last day, at 10h. 34m. P.M., at 5° S. of E. by N. Souths at 43°½ on the 1st, decreasing to 42°⅛ on the last day; and sets at about noon. He is moving eastward among the stars throughout the month, but is almost stationary among them towards the end of the month, as is shewn in the annexed diagram, shewing his path in the heavens during the months of October, November, and December; and it will he seen that his motion is directly from Regulus to a point situated 12° S. of Beta Leonis. He is near the Moon on the 7th.

PATH OF JUPITER, IN THE MONTHS OF SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1849.



Scale, 12 degrees to one inch.

JUPITER'S SATELLITES.—The Immersions of the 1st take place at the distance of one-half, and those of the 2nd at that of one diameter from the Planet, to the right as seen through a non-inverting telescope, and to the left as seen through an inverting telescope.

SATURN is in the constellation Cetus throughout the month.

He is an evening star; souths at an altitude of 40° nearly on every day; and sets at a point a little S. of W., at 1h. 20m. A.M., on the 1st; at 0h. 27m. P.M., on the 15th; and at 11h. 27m. P.M., on the last day. He is nearly stationary among the stars during the month, and is near the Moon on the 22nd.

URANUS souths on the 15th, at 7h. 47m. P.M., at an altitude of 47° nearly on every day. He sets, on the 1st, at 3h. 33m. A.M.; and on the last day, at 1h. 32m. A.M. He is nearly stationary among the stars, and is near the Moon on the 31st.

Days of the Month.	TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN. Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 8	10 20	1 33	6 48	7 26
6	11 21	10 25	1 5	6 31	7 7
11	11 34	10 31	0 38	6 13	6 47
16	11 49	10 38	0 10	5 55	6 28
21	Aftern.	10 44	Aftern.	5 36	6 8
26	0 19	10 51	11 8	5 17	5 49
31	0 35	10 59	10 41	4 58	5 31

JUPITER'S SATELLITES. Eclipses of 1st Sat. Immersion.	2nd Sat. Immersion.
D. H. M.	D. H. M.
4 5 37 A.M.	9 1 9 A.M.
13 1 58 A.M.	16 3 43 A.M.
20 3 51 A.M.	23 6 17 A.M.
27 5 44 A.M.	
29 0 13 A.M.	

OCCULTATIONS OF STARS BY THE MOON. Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Stars.	At the dark or bright limb of the Moon.
		D. H. M.	
Rho Leonis	4	5 10 40 P.M.	Bright
		5 11 34 P.M.	Dark
33 Ceti	6	23 10 51 P.M.	Dark
		23 11 23 P.M.	Bright
A star in Arietis	4	25 4 4 P.M.	Dark
		25 4 46 P.M.	Bright
3 Cancri	6	30 5 58 P.M.	Bright
		30 6 48 P.M.	Dark

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.	
LAST QUARTER ..	6	6	53	P.M.
NEW MOON	14	3	38	P.M.
FIRST QUARTER ..	22	7	40	P.M.
FULL MOON	29	2	0	P.M.
PERIGEE	1	4	0	A.M.
APOGEE	16	6	0	A.M.
PERIGEE	29	4	0	P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination South.	VENUS. Right Ascension	VENUS. Declination South.	MARS. Right Ascension	MARS. Declination North.	JUPITER. Right Ascension	JUPITER. Declination North.	SATURN. Right Ascension	SATURN. Declination South.	URANUS. Right Ascension	URANUS. Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	15h. 49m	19° 40′	15h. 1m	15° 43′	6h. 11m	25° 49′	11h. 29m	4° 38′	0h. 8m	1° 50′	1h. 25m	8° 18′
6	16 21	21 44	15 26	17 30	6 4	26 4	11 30	4 27	0 8	1 49	1 25	8 15
11	16 55	23 21	15 52	19 6	5 55	26 17	11 32	4 17	0 8	1 47	1 24	8 13
16	17 29	24 29	16 18	20 29	5 47	26 26	11 34	4 9	0 9	1 44	1 24	8 12
21	18 3	25 5	16 44	21 37	5 38	26 30	11 35	4 3	0 9	1 39	1 24	8 11
26	18 39	25 6	17 11	22 29	5 30	26 32	11 36	3 59	0 10	1 34	1 24	8 10
31	19 14	24 29	17 38	23 5	5 22	26 30	11 36	3 57	0 11	1 28	1 24	8 10

Good Christians, rise; this is the morn
When Christ, the Saviour, He was born;
All in a stable so lowlee,
At Bethlehem, in Galilee.
Rejoice! our Saviour He was born
On Christmas-day in the morning.—*Old Christmas Carol.*

Hush! hush! These are the village waits, not your noisy musicians, whose clamour arouses a whole neighbourhood, but those who bring no other instruments excepting their voices—who go from hamlet to hamlet all night long, chanting such carols as our pious forefathers loved to listen to in those good old days when Christmas was not only a holiday, but a holy time. Let us uplift the corner of the white blind gently. Although they hope that all are listening, they would but feel uneasy to know that they were overlooked. We shall be very glad to see them on boxing-day, when they will come round and simply announce themselves as the waits; then we can reward them for the pleasure they have afforded us. A few old-fashioned doors will be opened, where they will be cheered with elder wine, spiced ale, and plum cake; they know the houses. There are those who make a point of sitting up to receive them; cold although the night may be, they will not lack bodily comfort. How sweetly the moonlight sleeps upon the untrodden snow; it kept falling until twelve o'clock; and then the queen of the stars came out adorned with more than her usual brilliancy. It is just such a Christmas morning as a lover of old customs would crave for—cold, frosty, and bright. How the snow will "crunch" beneath the feet at daylight! But they are gone; you can just hear their voices at intervals, sounding faintly over the snow, when the red cock that crows from the far-off farm is silent, for they are now singing at the lonely grange beside the wood. The old farmer who resides there would never fancy that it was Christmas unless he heard the waits. Rumour, who is a slanderer, does say that when they have left his old-fashioned parlour they never again sing in tune—that bass is heard in place of tenor, and treble gets over his part before the others have well begun—and that, when complaints are made the next morning, the only answer is, "Christmas comes but once a year."

Then comes the church service in the morning; nobody either thinks or cares about the sermon on that day—all feel good enough without it. No! their thoughts are with the friends they hope to meet; they need no other sermon than the snow which lies on the graves of those who are still dear to them in memory—the dead, who, perhaps, only the year before, were guests at the Christmas board—those whom

The breezy call of incense-breathing morn,
The swallow twittering from the straw-built shed,

The cock's shrill clarion, or the echoing horn,
No more shall rouse them from their lowly bed.

For them no more the blazing hearth shall burn,
Or busy housewife ply her evening care;
No children run to lisp their sire's return,
Or climb his knees the envied kiss to share.

In vain are the beloved portraits decorated with holly and ivy: the same calm faces look down upon the Christmas festival, but the eyes no longer brighten, neither do the lips move, nor will the merry laugh that rung like music over the scene ever more be heard.

High up the vapours fold and swim,
Above him floats the twilight dim,
The place he knew forgetteth him.—TENNYSON.

They mistake Christmas who state that it is a merry day; on the contrary, a Christmas dinner is more often a solemn assemblage of those who live, and whose thoughts are occupied with those who have departed. In England, with but few exceptions, it seldom consists of more than members of the family. If a friend drops in it is generally one who has no other friends to meet; or if he has, they lie too far and wide away for him to visit them. It is a time when grandchildren and grandfathers and grandmothers meet together; when old times and old scenes are recalled; when the hidden household gods are brought forth; and the young bride, often for the first time, meets the family of which she is now a member; when old crusty men, who after much persuasion have at last agreed to attend, shovel off the cold crust from their hearts, as the good old port comforts them, go home, and alter their will, and sleep more comfortably after it than they have ever done for years before; when hands which have never been clasped for many a long day lie enfolded within each other, and marvel however they came to be separated. No! Christmas is not a merry season; it makes a man think of how few such days he can remember, and how few more he can hope to see. He begins to think that a brief year of days spent so happily, dating from the time he first slept an infant in the cradle, and hut kept up once a week, would tell him that he had lived beyond half a century; and he feels no wish to number as many more, although he knows that

In the grave there is no company.

"From the first introduction of Christianity into these islands," says the Book of Christmas, "the period of the Nativity seems to have been kept as a season of festival, and its observance recognised as a matter of state. The Witenagemots of our Saxon ancestors were held under the solemn sanction and beneficent influence of the time; and the series of high festivities established by the Anglo-Saxon kings appear to have been continued with yearly increasing splendour and multiplied ceremonies under the monarchs of the Norman race. From the Court the spirit of revelry descended, by all its thousand arteries, throughout the universal frame of society, visiting its furthest extremities and most obscure recesses, and everywhere exhibiting its action, as by so many pulses, upon the traditions, and superstitions, and customs which were common to all or peculiar to each. The pomp and ceremonial of the Royal observance were imitated in the splendid establishments of the more wealthy nobles, and far more faintly reflected from the diminished state of the petty baron. The revelries of the baronial castle found echoes in the hall of the old manor-house, and these were again repeated in the tapestried chamber of the country magistrate, or from the sanded parlour of the village inn: merriment was everywhere a matter of public concernment, and the spirit which assembles men in families now congregated them by districts then."

Such, indeed, was the merry Christmas of the olden time. The whole wide country was then filled with rejoicing: in the bannered hall the long tables were spread; on the ancient armour and the antlers of the wild deer, holly, and ivy, and mistletoe were placed; the huge yule log went roaring up the wide old-fashioned chimnies, and cold although it might be without, all was warm and comfortable within. The large wassail-bowl—a load of itself when full—was passed round, and each one before he drank, stirred up the rich spices with a sprig of rosemary, while the cooks (says an old writer) "looked as black and greasy as a Welsh porridge-pot." Roast goose and roast beef, minced pies, the famous boar's head, plum porridge, and plum pudding, together with no end of sausages, and drinks of every description, but, chief of all, the "bowl of lamb's wool," seemed to have formed the staple luxuries of an old Christmas dinner. But even more than two hundred years ago the cry was raised, "Is old, good old Christmas gone?—nothing but the hair of his good, grave, old head and heard left!"

Were I to paint a December day, such as I wandered out in last year (1847), it would read more like a description of spring than winter. The sky was intensely blue, and the sun shone with a summer brightness. The wide Downs which lie to the left of Sanderstead seemed to bask in the sunlight of May. On either hand, between the woods, the holly and ivy hung aloft in the richest green, while hips and haws glittered in the hedgerows in thousands, like beads of the brightest coral. The woodlark (which, it is well known, sings nearly the whole of the year, and is only silent in June and July), and the robin were singing as cheerfully as if it were a fine day in February; and, unless my ear deceived me, I caught the notes of the thrush. The day was, indeed, so beautiful that I could not resist the temptation of venturing into the wood, for there was a dryness about the fallen leaves such as I had but rarely seen in winter. Wandering onward, I arrived at a little dell. One side was in shade; on the other the golden sunshine slept. Strange, there was also a rich yellow light on the shady side of the dell. On a nearer approach, I saw hundreds of primroses in full flower. Pale and beautiful, there they stood, throwing a sweet fragrance all around; the new green leaves and the old ones, brown and decayed, all adhering to the same root. Such a discovery would have been a little fortune to a London flower-seller; and had they been dug up by the roots, and offered for sale in Cheapside (which is not more than twelve miles from Sanderstead), no doubt the whole dell-full might have been disposed of in one day, for it was just upon the verge of Christmas.

At no season of the year is the hare in better condition than now. He has got over his full autumn feeding, and there is a firmness about the flesh which will be lost after January. Hare hunting takes the precedence of the fox chase. It was followed by the ancients, and we have a description of it by Xenophon, long before the Christian era. By many it is also considered to afford more true hunting than the fox chase. The hare is no sooner found than it starts off and makes a circle; and as the scent is very weak until the hare is warmed, the harriers are often at fault, and driven over, and sometimes run backward instead of forward, hunting, as it is termed, "heel-ways." The hare should never be pressed upon too closely when first found, nor should the hounds be followed too near, as they sometimes turn back to regain the lost scent. Besides, by remaining behind, the motions of the hare can be better observed at a reasonable distance, and all her foils and doubles detected. It is wonderful what doubles the hare will sometimes make, when the scent has become warm: instances are on record of her feats on a dry road, when, having run all sorts of intricate ways, she will at last make a clear spring several feet from the spot, which occasions many a fault; and while the harriers are beating widely about, or are far ahead, she will lie motionless in the very spot where she at one spring threw herself until the hounds have passed, when she will return again to her old starting point. When the hare begins to make more contracted circles, it is a sure proof that the hunt is pretty well over, for it is sure to come soon within the "spread of the pack," and it will not then be long before her death-cry is heard. Although the hare sleeps, the eyes are never closed: it is the same with fishes—they also sleep with the eyes open.

The following description of winter, written about three hundred years ago, will be new to thousands of our readers; it was written by a good old Scotch bishop, named Gavin Douglas, and first rendered familiar to English readers by the poet Warton, to whom we are indebted for the following beautiful modern version:—"The fern withered on the miry fallows; the brown moors assumed a barren mossy hue; banks, sides of hills, and bottoms, grew white and bare; the cattle looked hoary from the dank weather; the wind made the red reed waver on the dyke. From the crags and the foreheads of the yellow rock hung great icicles, in length like a spear. The soil was dusky and grey, bereft of flowers, herbs, and grass; in every holt and forest the woods were stripped of their array. Boreas blew his bugle-horn so loud that the solitary deer withdrew to the dales; the small birds flocked to the thick briars, shunning the tempestuous blast, and changing their loud notes to chirping; the cataracts roared, and every linden tree whistled and bowed to the sounding wind. The poor labourers, wet and weary, draggled in the fen, the sheep and shepherds lurked under the hanging banks or wild broom. Warm from the chimney side, and refreshed with generous cheer, I stole to my bed, and lay down to sleep, when I saw the moon shed through the window her twinkling glances and wintry light; I heard the horned bird, the night-owl, shrieking horribly with crooked bill from her cavern; I heard the wild geese, with screaming cries, fly over the city through the silent night. I was now lulled to sleep, till the cock, clapping his wings, crowed thrice, and the day peeped. I waked and saw the moon disappear, and heard the jackdaws cackle on the roof of the house. The cranes, prognosticating tempests, in a firm phalanx pierced the air, with voices sounding like a trumpet. The kite, perched in an old tree fast by my chamber, cried lamentably, a sign of the dawning day. I rose, and half opening my window, perceived the morning, livid, wan, and hoary; the air overwhelmed with vapour and cloud; the ground, stiff, grey, and rough; the branches rustling; the sides of the hills looking black and bard with the driving blasts; the dew-drops congealed on the stubble and rind of trees; the sharp hailstones, deadly cold, and hopping on the thatch." We know no description of winter so beautiful as the above; nearly every word is a picture, every epithet is well chosen, and the whole as fine a piece of word-painting as ever appeared in descriptive poetry.

We have again arrived at the close of another year, and in our journey through it have glanced at many of the old manners and customs which are fast fading away. The railroads, that have cut up the ancient highways of England, will soon uproot the few rude and rural customs that remain: the rapid interchange will revolutionise the habits of our simple villagers, and they will become ashamed of following the ancient amusements, which for centuries have been the delight of their ancestors. As for ourselves, we seem to have lived on the verge of important changes. We have with our own eyes beheld the old May-games, harvest-homes, sheep-shearing feasts, wakes, statutes, Plough-Mondays, Palm-Sundays, and other ancient festivals and ceremonies, as they have no doubt existed for at least three or four centuries. We have also been dragged at the rate of two or three miles an hour in the creeping market-boat and heavy stage-waggon, and been wafted fifty miles in the same space of time in an express train. We can also just remember when a steam-boat was a marvel, and the banks of the river were lined for miles with wondering spectators. What changes another generation may witness, the future can alone unravel; if they keep pace with those that have marked the last memorable quarter of a century, scarcely a feature of the England which we have here depicted will remain. All the wonders of the "Arabian Nights" sink into insignificance beside our iron roads and electric telegraphs. As for Puck's exploit in the "Midsummer Night's Dream," of "putting a girdle round about the earth in forty minutes," we shall ere long be able to send a message around the same circle in less time than the fairy hoasted of.

(The Descriptions of the Twelve Months are from the pen of Thomas Miller.)

ASTRONOMICAL PHENOMENA.

(Continued from August.)

greater at some oppositions than at others. If the orbits of Mars and the Earth were perfect circles, the distance between the two Planets at every opposition would be the same; but, owing to the elliptic figure of the orbits, a considerable variation in this distance takes place. The least distance possible between the Earth and Mars is when the opposition of Mars occurs at the time when the Earth is farthest from the Sun, and Mars the nearest to the Sun. At the time of opposition this year, on December 17, the Sun and the Earth are almost at their least distance from each other, and therefore the Planet will not appear in his greatest splendour. At the opposition in the year 1830, and that in 1845, the Planet approached nearer to the Earth than it will do agsin till the year 1860. At the opposition of Mars in 1830, the Planet's surface was watched by Dr. Maedlar, the Director of the Imperial Observatory, at Dorpat, Russia, and it was published in "Schumacher's Journal;" that all times there was seen at the South Pole, with great distinctness, a white, glittering, well-defined space, which has been called the "Snowy Zone." During the examination, several spots were seen. At the opposition in the year 1845, the surface of the Planet Mars was examined at the Royal Observatory, Greenwich; and the following is extracted from the Greenwich Astronomical Observations for the year 1845:—

"August 22nd, 11½h.—The night was very fine; and Mars being very nearly at the point of nearest approach to the Earth, the opportunity was taken to endeavour to obtain a delineation of his surface. Drawings of his appearance were made by the Astronomer Royal and by Mr. Main; and the following verbal description was added by the latter:—'About 10° to the apparent west of the apparent north point of the border of the Planet, there was a dazzling bright cap, which was contrasted very strongly by a dark zone immediately beneath it. A little below this shaded band a streak appeared, brighter than the parts above and below it, and of pretty nearly the same brightness as the borders of the Planet. The most remarkable dark spot on the disk was to the apparent left of the general dark mass which occupied a considerable portion of the upper surface; and there was also a dark spot on the right, quite clear of the general dark surface. It would seem as if an immense mountain range extended from one spot, across the dark surface, to the other spot; for the whole of the surface contiguous to the line joining the spots was very much mottled. On a minute examination, it appeared to me that the lower boundary of the darkened surface was in general form similar to a small circle of the sphere rather to the left of the centre of the Planet. It is probable that, with a more powerful telescope, some of these details would appear essentially different; for it was found very difficult to see the surface of the Planet with sufficient distinctness to record even the vague description which has been given.' Mr. Glaisher undertook to watch the Planet at intervals during the night, for the purpose of observing whether the dark spots shifted their position appreciably. The image was too unsteady and undefined during his watch to determine this point satisfactorily; but his impression was that the whole dark mass on the surface moved towards the left."

"August 29th, 11h.—The Planet was again watched by Mr. Main; and a sketch was made, differing in every particular (except in the appearance of the bright cap) from that made on August 22nd. The most remarkable appearance to be recorded verbally was, that between two dark horns or cusps, which terminated right and left the lower part of the darkened surface, the colour was of a singularly red tint, more nearly resembling rich red earth than anything else with which the observer could compare it. The dark part had a very faint blue tint."

The snowy zone of the South Pole of Mars has been generally noted by most observers at his opposition; and at several of these times dark spots have been seen upon the Planet, by observation of which the time of rotation of the Planet on its axis has been determined to be about 24h. 37m. 23s.

Mars will be most favourably situated for observations of this kind during the months of November and December of the present year. He will be finely located for examination, being high in the heavens, at midnight; he may be readily distinguished, by means of the diagrams given of his path in the heavens, by the redness of his colour, and by his occupying a situation almost midway between the stars Castor and Pollux and the Pleïades, moving from the former towards the latter.

ON THE RECENTLY-DISCOVERED PLANETS.

Till the discovery of Uranus, by Sir William Herschel, in the year 1781, six Planets only were known; viz. Mercury, Venus, the Earth, Mars, Jupiter, and Saturn. Kepler, from some analogy which he found to subsist among the distances of the Planets from the Sun, had suspected the existence of one situated between the orbits of Mars and Jupiter. The discovery of Uranus, occupying an orbit confirmatory to the analogy of distance before referred to, impressed Astronomers very firmly with the belief that a Planet would be found between Mars and Jupiter. The interval between the orbits of Mercury and Venus is about 31,000,000 of miles; between those of Venus and the Earth, 27,000,000; and between those of the Earth and Mars, 51,000,000.* But between the orbits of Mars and Jupiter the interval amounts to 349,000,000 of miles, thus interrupting the appareut order of distance, and which is resumed by the distances of the Planets then known beyoud Jupiter. Professor Bode at about this time published his celebrated law of the planetary distances. This law may be thus stated. If we set down the number 4 several times in a horizontal line, and to the second from the left hand add 3; to the third add twice 3, or 6; to the next add twice 6, or 12; to the next add twice 12, or 24, and so on; the sums of these numbers will represent nearly the relative distances of the Planets from the Sun; thus:—

4	4	4	4	4	4	4	4	4	&c.
	3	6	12	24	48	96	192	384	&c.
Sums	4	7	10	16	28	52	100	196	388	&c.

If the distance of the third Planet (the Earth) from the Sun be called 10, then, in this scheme, 4 will represent *nearly* the distance of Mercury; 7, that of Venus; 16, that of Mars; 28, that of the then unknown Planets, or, as it is now known, of the nine small Planets, &c. In the years 1784 and 1785, Baron de Zach, from these analogical distances, calculated the orbit of the empirical Planet, and published the results of his calculations in the Berlin Almanack for 1789. He gave the distance of the assumed Planet from the Sun as nearly 2⅞ times that of the Earth from the Sun, and that its period of revolution was about four years and nine months. In the year 1800, Baron Zach formed an association of 24 observers, who divided the Zodiac into 24 zones, each observer to examine one part, for the express purpose of searching out this concealed Planet. On Jan. 1, 1801, Piazzi, the Director of the Observatory at Palermo, noticed a small star in Taurus, which, on January 2, he found had retrograded no less than 4 minutes of arc in right ascension, and 3½ minutes of arc in N. declination. This retrograde motion continued till January 12, when the movement changed to direct motion. This proved to be a Planet; and Piazzi gave it the name of Ceres, in honour of Sicily, Ceres being the tutelary goddess of that country; and her emblem, the sickle (⚳), was adopted as the symbol of this Planet.

On the 28th of March, 1802, Dr. Olbers, of Bremen, in Lower Saxony, found another Planet situated in Virgo, and which, like Ceres, was found to revolve in an orbit situated between Mars and Jupiter. Dr. Olbers gave this Planet the name of Pallas, and chose the lance ⚴, the attribute of Minerva, as its symbol. Thus two Planets were discovered, where one was suspected; and it was conjectured that they were fragments of a broken Planet, which had formerly circulated at the same distance from the Sun, and had been shattered by some internal convulsion. On this hypothesis, it was thought that there were other parts undiscovered, and the search was rigorously kept up.

On the 1st of September, 1804, M. Harding, at the Observatory at Lilienthal, near Bremen, observed a small star in Pisces, which proved to be a Planet, moving also at about the same distance as the two preceding Planets from the Sun. The Planet was called Juno, and the starry sceptre of the Queen of Olympus was adopted as its symbol ⚵.

On the 29th of March, 1807, Dr. Olbers discovered another Planet, then occupying a position in Virgo, whose orbit was found to be also situated between those of Mars and Jupiter. Gauss named this Planet Vesta, and chose for its symbol ⚶, an altar surrounded with a censer holding the sacred fire.

Thus, within six years, four Planets were discovered. After the discovery of Vesta, the examination continued till 1816, but without detecting another planetary object.

On the 8th of December, 1845, M. Hencke, of Driessen, while examining a portion of the heavens in Taurus, saw a star occupying a position where, he felt assured, no star previously existed. This object proved to be a Planet, and was found to be one of the remarkable group situated between Mars and Jupiter. The place of this Planet at the time of its discovery, and its path in the heavens, was engraved in the Illustrated London News of February 7, 1846. It is called Astrea, and its symbol is ⚳.

The discovery of the Planet Neptune ♆, September 23, 1846, at Berlin, was announced in the Almanack for 1847; and a chart, showing its place in the heavens at the time of discovery. Other particulars were given of this Planet in our Almanack of last year. To these we have to add, that Mr. Lassell, of Liverpool, who is in possession of an excellent telescope, on the 3rd of October, 1846, was impressed with the idea that the Planet had not the appearance of a round ball only, but that like Saturn it was surrounded by a ring. Since that time, Mr. Lassell has perfectly satisfied himself that this appearance does not arise from any defect in his telescope; and he has frequently seen the same appearance.

Professor Challis states that, on the 12th of January, 1847, he received a distinct impression that the Planet was surrounded by a ring; on the 14th, he saw the ring again. The ratio of the diameter of the ring to that of the Planet was about that of 3 to 2.

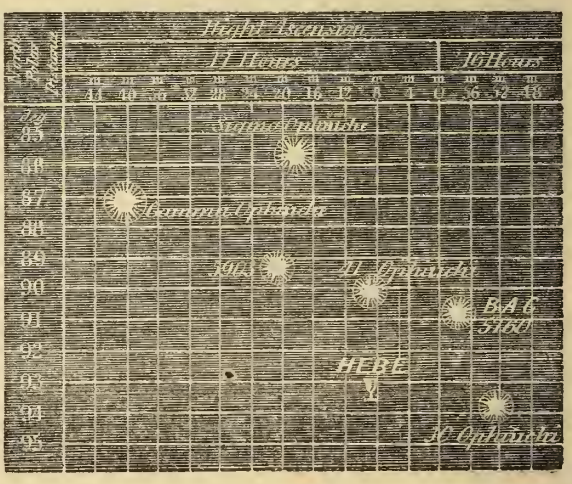
It seems certain that Neptune is attended by a satellite, and Mr. Lassell has determined its period to be 5d. 20h. 51m.

The orbit of Neptune, however, differs very materially from that assigned to it by Le Verrier and Adams; it is found to differ very little from a circle; and its distance from the Sun is less than that assigned to it by theory, and does not confirm Bode's law of planetary distances.

From these circumstances an attempt has been made, originating in America, with Professor Pierce of Cambridge, United States, and others, and subsequently by M. Babinet, to deprive Messrs. Leverrier and Adams of the great honour so justly due to these gentlemen, by asserting that the Planet Neptune is not the planet that their calculations had pointed out. The difference between the elements of this planet as indicated by theory—before any human eye had ever viewed it as a planet—and those deduced from observation, are not greater than might have been expected. It must be regretted that any difference of opinion on this subject should have existed.

On July 1, 1847, M. Hencke discovered another Planet, situated in Ophiuchus, and to which the name of Hebe was given, with a cup for its symbol (⚲). The place occupied by the Planet at the time of its discovery is shown in the annexed engraving.

PLACE IN THE HEAVENS OCCUPIED BY HEBE, ON ITS DISCOVERY BY M. HENCKE.



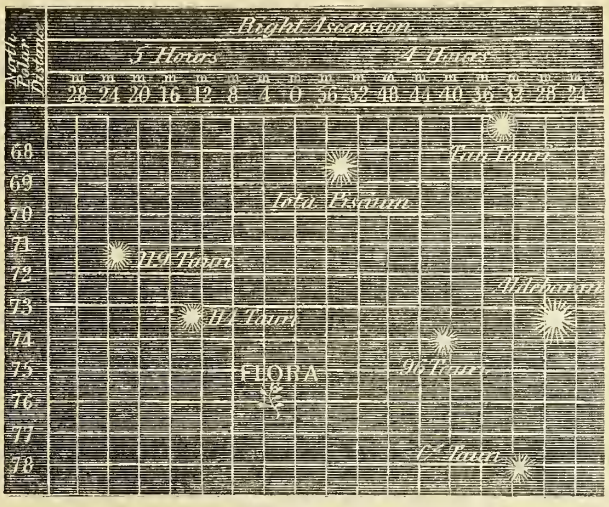
On August 13, 1847, Mr. Hind discovered another member of the remarkable group of Planets between Mars and Jupiter. Mr. Hind observes, in the Monthly Notices of the Astronomical Society (Vol. xvii., No. 17), that "the Planet has

* The interval between Mercury and Venus is too large; and it seems highly probable that there are Planets situated between them, which are invisible by reason of their small size and proximity to the Sun.

been detected in a systematic search, instituted expressly with the view to the discovery of such a body, and commenced in November, 1846. The name given to this Planet is Iris, and the symbol adopted for its designation is a semicircle, with an interior star (⊛)." The place in the heavens occupied by this Planet at the time of its discovery was engraved in the ILLUSTRATED LONDON NEWS of August 21, 1847.

On October 18, 1847, Mr. Hind, while comparing the excellent chart of Professor Knorre with the heavens, discovered what seemed to be a star of the ninth magnitude, and which proved to be another of this remarkable group of Planets. At Mr. Bishop's request, Sir John Herschel has named this Planet, Flora, with a flower (⚘) for its symbol. The place occupied in the heavens at the time of its discovery is shewn in the annexed engraving.

PLACE IN THE HEAVENS OCCUPIED BY FLORA, ON ITS DISCOVERY BY MR. HIND.



On April 25, 1848, Mr. Graham discovered another Planet, at Mr. Cooper's Observatory, Markree, Sligo, Ireland, by following up a class of observations recommenced by Mr. Cooper. This Planet has been named Metis, with an eye and star for its symbol (⚵). Its place in the heavens at the time of discovery is shewn in the annexed engraving.

PLACE IN THE HEAVENS OCCUPIED BY THE PLANET METIS, ON ITS DISCOVERY BY MR. GRAHAM.

Thus six Planets have been discovered in less than three years: the first, Astrea, the 8th of December, 1845; the last, Metis, April 25, 1848. These several discoveries of telescopic Planets lead us to suspect the existence of many such bodies, yet undiscovered; and there seems good reason to believe that in a few years we shall have a large addition to the members of the Solar System. M. Valz has proposed to the Académie des Sciences de Paris, a plan which, it is believed, would, in four years discover all these unknown Planets, by examining carefully all the small stars situated near the ecliptic. To the carrying out of this plan it is necessary to construct 24 celestial charts, containing all the stars to the 12th magnitude situated in or near the ecliptic, and subdividing the work of examination into twelve parts. M. Valz has presented to the Académie a chart of this kind, constructed by M. Faye.

The dimensions of the orbits of these nine small planets are nearly the same; but their inclinations to the plane of the ecliptic are very different. Their inclinations are—Flora, 9° 1′ 37″; Iris, 13° 20′ 50″; Vesta, 5° 7′ 22″; Hebe, 11° 31′ 11″; Astrea, 10° 49′ 56″; Juno, 14° 42′ 20″; Ceres, 4° 24′ 57″; Pallas, 13° 54′ 49″; and Metis, 5° 35′ 24″. Their periods of revolution are, Flora, 1193 days; Iris, 1345 days; Vesta, 1325 days; Hebe, 1375 days; Astrea, 1510 days; Juno, 1595 days; Ceres, 1681 days; and Pallas, 1686 days.

The dimensions of all these Planets are small; and they are not distinguishable by the naked eye; and the most powerful telescopes have hitherto failed to measure their apparent diameter with even tolerable accuracy.

TIMES OF THE POLE STAR BEING ON THE MERIDIAN, OR DUE NORTH, DURING THE YEAR 1849.

THE Pole Star being situated at the distance of 1°¾ from the North Pole, describes a small circle round it once in 24 hours, and is therefore on the meridian, or due north, twice every day, once above the point round which it revolves, and once below it. The following are the times on the 1st day of every month this year that the Pole Star is so situated, and at no other times is this star due north on those days:—

		D.	H.	M.			D.	H.	M.		
Jan.	1 at	6	22	2	A.M.	below the Pole, and	6	20	4	P.M.	above the Pole.
Feb.	1 ,,	4	19	43	,,	,,	4	17	45	,,	,,
March	1 ,,	2	29	19	,,	,,	2	27	21	,,	,,
April	1 ,,	0	27	16	,,	,,	0	25	19	,,	,,
May	1 ,,	10	27	28	,,	above the Pole, and	10	25	30	,,	below the Pole.
June	1 ,,	8	25	52	,,	,,	8	23	54	,,	,,
July	1 ,,	6	28	19	,,	,,	6	26	22	,,	,,
Aug.	1 ,,	4	26	50	,,	,,	4	24	51	,,	,,
Sept.	1 ,,	2	25	17	,,	,,	2	23	20	,,	,,
Oct.	1 ,,	0	27	30	,,	,,	0	25	32	,,	,,
Nov.	1 ,,	10	23	37	,,	below the Pole, and	10	21	39	,,	above the Pole.
Dec.	1 ,,	8	25	27	,,	,,	8	23	29	,,	,,
Dec.	31 ,,	6	27	8	,,	,,	6	25	10	,,	,,

From these times those of the meridian passage of the star can be easily calculated for any other day in every month.

All stars whose angular distance from the North Pole is less than the co-latitude of the place of observation, are on the Meridian twice every day; and all stars whose distance from the North Pole is greater than the co-latitude of the place, are on the Meridian once only every day: and at these times they are situated due south.

MAGNETIC DECLINATION, OR VARIATION OF THE COMPASS.

IN the Almanack for the year 1847, we gave the average monthly position of the magnetic needle, with respect to the astronomical meridian, for the years 1841, 1842, and 1843. In the Almanack of last year, the values of the angles between the astronomical and magnetical meridian for Greenwich, were given for the year 1844. Within the last year, two volumes of the Greenwich Magnetical and Meteorological Observations for the years 1845 and 1846 have been published; from which we learn that the following were the monthly values of the westerly declination, deduced from two-hourly observations made during the day and night, in the years 1845 and 1846.

1845.		1846.	
January	22° 58′ 6″	January	22° 50′ 56″
February	22 57 20	February	22 50 17
March	22 57 6	March	22 49 21
April	22 59 14	April	22 51 51
May	22 57 28	May	22 49 32
June	23 1 10	June	22 51 43
July	22 57 24	July	22 49 24
August	22 58 11	August	22 49 33
September	22 56 7	September	22 48 55
October	22 53 21	October	22 47 55
November	22 52 53	November	22 47 38
December	22 52 18	December	22 47 51

And the mean westerly declination, for the year 1845, was 22° 56′ 43″; and that for the year 1846 was 22° 49′ 35″. The decrease, from the year 1844 to 1845, was 18′ 36″; and that from the year 1845 to 1846 was 7′ 8″.

MANETIC DIP.

IF a magnetic bar be suspended by its centre of gravity, so as to counteract the action of gravity, it will settle in the Magnetic Meridian; but that extremity of it which is directed towards the north will point downwards, or, as it is technically called, dip. The magnet thus inclined at Greenwich is now something less than 69°. The following are the mean quarterly values of this element, as observed at the Royal Observatory, Greenwich, in the years 1845 and 1846, extracted from the published volumes for those years.

MEAN QUARTERLY MAGNETIC DIP.

Months forming the Quarterly Period.	At 9h A.M.		At 3h. P.M.	
	1845.	1846.	1845.	1846.
Jauuary, February, March	66° 0′	68° 58′	69° 0′	68° 56′
April, May, June.....	68° 58′	68° 57′	68° 57′	68° 57′
July, August, Septemher	68° 56′	69° 1′	68° 54′	68° 59′
Octoher, Novemher, Decemher..	68° 54′	68° 59′	68° 59′	68° 59′

And the mean value for the year 1845, at 9 A.M. was 68° 56¾′
,, ,, at 3 P.M. was 68° 58′
,, 1846, at 9 A.M. was 68° 58′
,, ,, at 3 P.M. was 68° 57½′

The mean Magnetic Dip, at 9h. A.M., had decreased hetween the ycars 1844 and 1845 hy 3¼′; and hetween the years 1845 and 1846, it had increased 1¼′.

The mean Magnetic Dip, at 3h. P.M., had decreased hetweeu the years 1844 and 1845 hy 2′; and between the years 1845 and 1846, it had decreased by half a minute of arc.

These values of the dip and declination at Greenwich are not always the same. See the Almanacks of the two preceding years.

ENCKE'S COMET.

In the year 1818, Encke ascertained the period of a small comet to he 1208 days only. This announcement was received with some degree of douht by many persons. The comet had heen seen several times hefore; in 1786, hy Messrs. Mechain and Messier; in 1795, hy the late Miss Herschel; in 1805, hy Pons; and in 1818, hy Pons again; but at these times it was supposed that different comets had heen observed. Encke announced its re-appearance in 1822, and it was observed at this time hy Sir Thomas Brishane, at Paramatta. It has since been observed at the predicted times, hut differing somewhat from the predicted places, these differences always heing the same way; and hence it was snpposed that this was caused hy the comet meeting resistance to its free motion hy the medium through which it passed. On August 14th, 1848, Lieutenant Stratford, the superintendent of the Nautical Almanack, published an ephemeris of this comet; and on Septemher 22nd, 1848, it was discovered hy Professor Smyth, at the observatory of Dr. Lee, at Hartwell, occupying a place differing from that predicted hy 24 seconds in Right Ascension, and 50 seconds of arc only in North Polar distance.

THE FLOWER-GARDEN, &c.

BY MRS. LOUDON.

JANUARY.

The principal work that can be done in a garden in January is to protect tender plants from frost, and this is a task of no small difficulty in pleasure-grounds and shrubberies, as damp must be guarded against as well as cold. After warm dry summers the task of protecting half-hardy shrubs during the winter is rendered comparatively easy, by the ripening and hardening of the wood; but after a summer like that of 1848, the young wood which has grown remains even in winter green and succulent, and is as easily killed as the stalk of any herbaceous plant. After such a season it will be useless to attempt to cover the stems and leaves of half-hardy evergreens, particularly those with thick fleshy leaves, like the camellia and the evergreen magnolia; and the best way will be to protect their roots and the lower part of the stem with a thick mulching of straw or decayed leaves. In most situations, the acacias and other Australian plants which require matting to preserve their stems, will probably be killed to the ground; but it must be observed, that when acacias are killed by frost, the stem only should be cut down, and the root should be left in the ground, as in most cases it will send up fresh shoots the following spring. Herbaceous plants require no other treatment than covering the roots with dead leaves, as the stems generally die down in autumn. The tree pæony is, however, frequently affected by spring frosts, and it is best protected by a skeleton framework of hoops, covered with matting, sufficiently large and light to admit of its being taken off in the middle of the day, when the air has been warmed by the sun. Bulbs, when they are left in the ground during the winter, should never be covered with straw, and only moderately with dead leaves, as they are easily injured by damp, and when deeply covered they are frequently attacked by mice. Alpine plants are most easily protected by plunging the pots in a bed of earth, over which is placed a skeleton frame made of half hoops at regular distances, and covered with matting. It must be observed that in all cases where it is directed to protect plants by covering them with mats, which are to be taken off during the day when it is not actually freezing, the mats must always be replaced before the sun sets; or, as a safer rule, they should only be taken off between ten in the morning and three o'clock in the afternoon. The eggs of insects should be sought for at this season, and destroyed wherever they can be found.

In greenhouses as much mischief is often done by keeping the plants too hot, as would have been experienced by exposing them to the cold. The proper heat, for a greenhouse is never to let the thermometer fall lower than 40°, nor rise above 45°. Air should also be given regularly every day when it is not actually freezing. It is an important axiom in plant culture, that air is as necessary as water; and the admission of air to a greenhouse, particularly during winter, is absolutely essential for the health of the plants. Plants obtain nourishment from air as well as from water; and when they have too much water and too little air, they invariably damp off. The sashes of every greenhouse should be made to open at the top, to admit the exit of the heated air before any cold air is suffered to enter; as, if the lower sashes are opened first, so as to admit the cold air before the heated air has escaped, the latter is condensed, and falls back upon the plants in visible drops, and this is found to be highly injurious to them. Plants may be preserved during winter in what is called a cold pit, quite as well as in a greenhouse. A cold pit is an excavation in the ground, to the depth of about three and a half or four feet, and about six feet long and four feet wide. It is lined with brick, the brick-work being raised about a foot above the surface of the ground, and a wooden frame, the angle of which should be between 15° and 25°, fixed to it, in which a sash light is made to slide. The plants are placed at the bottom of the pit, and, when the weather is very cold, a mat is placed over the glass. In most places plants may be preserved in pits of this kind during the most severe winter without fire heat. When the plants to be preserved are very small, the pit need not be made so deep. When plants are kept in pits of this nature, they will require air to be given to them every fine day between ten and three. It should never be forgotten that all plants, whether in the open air or in a greenhouse, should be kept as dry as possible during winter. Plants in pits and greenhouses should have no more water given to them than is sufficient to keep them alive.

JASMINUM NUDIFLORUM.

Among the few ornamental plants which are in flower at this season, may be mentioned a new kind of yellow jasmine (*Jasminum nudiflorum*), which was introduced by Mr. Fortune, from Nankin in China, in July, 1844. It was at first kept in a greenhouse; but, like most of the other plants which have been introduced from China, it was soon found to do best in the open air; and it flowered beautifully in the garden of the Horticultural Society at Chiswick, for the first time, in January, 1848. The flowers are produced in great abundance, but are destitute of fragrance, and appear without the leaves. The plant is generally trained to a trellis, or tied to an upright post three or four feet high, so as to permit the young twigs to hang down, which they are naturally inclined to do.

FEBRUARY.

There is very little to be done in the pleasure-grounds and shrubbery in this month; but the gravel walks in both should be attended to, as gravel walks are very liable to be injured by melting snow. Care, therefore, should be taken, as soon as a thaw commences, or before, to remove a portion of the snow; and, as soon as the ground is sufficiently dry, the walks should be carefully rolled. Seeds of trees and shrubs are generally sown in this month; and the rule for sowing them is to let the soil be as deep above the seed as the seed is thick.

In the flower-garden great care should still be taken to protect the half-hardy plants, not only from the frost, but from the sun, which at this season is frequently very powerful. It must be observed that the mischief done by frost is always very greatly increased if the sun be permitted to shine upon the frozen plant: *it is like exposing a frost-bitten person to the heat of a great fire.* The best thing that can be done when a plant is frozen is to cover it over with a flower-pot, or some other covering, till the air has gradually become sufficiently warm to thaw it slowly. The choicer kinds of anemones and ranunculuses are planted in this month. They are generally planted in rows about five inches apart and two inches deep; and a little sand is put under each tuber when it is planted. In planting the ranunculus tubers, care should be taken to put the claws downwards, and not break off any part of them, as when the claws are broken off the tubers are very apt to rot. In planting the anemone tubers, the eye or bud should always be kept uppermost. This is generally considered the season for manuring a flower-garden, and the best kind of manure for the purpose is the remains of an old hot-bed. Decayed leaves, which have become a kind of mould, and chopped turf taken from an old pasture, are also very useful for enriching the ground intended for flowers; but guano and the new kinds of mineral manures are very dangerous in inexperienced hands, and even first-rate gardeners frequently find them produce injurious effects.

Very few flowers are in blossom in February, though sometimes a few early crocuses and snowdrops make their appearance even in the beginning of the month; and cinerarias, kalmias, and a few other plants, forced into flower by fire heat, are seen in the greenhouses. In the shrubbery, almost the only ornamental tree in flower is the *Chimonanthus fragrans*, or winter flower, which produces its delightfully fragrant flowers from December to March, though they are in the greatest perfection about February. This very interesting plant was introduced so long ago as 1776; but, as it was at first supposed that it would not live without protection, and as it will not flower till it is of a considerable size, it was very little grown. At last it struck some cultivator, that, as it was a native of Japan, it might very possibly live in the open air, as many plants from that country are found to do in England; and it is now found to grow freely in the open gardens in the neighbourhood of London, and to produce abundance of flowers, particularly if trained against a wall. The flowers are yellowish, with a purple mark at the bottom of each petal, and they appear before the leaves, which are of a smooth shining light green. There are two varieties: the first, which is common, has the flowers much larger and handsomer than those of the species but not quite so fragrant; and the other, which is very rare, has the flowers much smaller, and entirely yellow. In China and Japan, it is said that at great banquets pieces of the chimonanthus are laid by every plate. Plants of this shrub may be procured in most of the nurseries at about three-and-sixpence each; observing that it is known best under its old name of *Calycanthus præcox*.

CHIMONANTHUS FRAGRANS GRANDIFLORUS.

In greenhouses ventilation ought to be carefully attended to. Whenever the air is mild, and the sun shines, the door should be opened, as well as the windows, for at least half an hour in the middle of every day, so that there may be a free current of air through the house. All the dead leaves should be removed as soon as they are sufficiently decayed to come off the plant without injuring it; and if any moss or green matter appears on the surface of the earth in the pots, it should be removed, and the earth loosened with a flat piece of stick about an inch broad. It must be observed, that what has been said of removing the dead leaves does not apply to bulbous plants, as their leaves should be left on as long as possible. Plants require very little water at this season; but fire heat is even more useful than in the middle of winter, as it serves to dry up the damp, which is now a most dangerous enemy to plants. Where cuttings of greenhouse plants which were struck in autumn have been kept several together in one pot during the winter, they should now be potted separately.

A hot-bed may be made in this month for raising the seeds of tender flowers and striking cuttings. The manure used need not be more than two feet deep, and it should extend three or four inches beyond the frame on every side. When the steam of the manure is sufficiently gone off, a layer of light soil, six inches thick, should be spread over the bed. In this bed may be plunged pots containing the seeds of petunias and verbenas of various kinds, *Phlox Drummondi*, several sorts of mimulus, the blue lobelias, &c., and also of the following kinds of climbing plants, which will be found very useful for training against verandas, or to cover iron railings during summer:—The canary-bird flower (*Tropæolum peregrinum*), *Lophospermum scandens*, *L. Hendersoni*, *Maurandya Barclayana*, *Eccremocarpus scaber*, *Rhodochiton volubile*, *Thunbergia alata*, *T. alata alba*, *T. aurantiaca*, *T. a. superba*, and *Ipomœa rubro-cærulea*. The bulbs of various kinds of amaryllis, and those of *Agapanthus umbellatus*, may now be potted in a compost of two parts of loam and one of rotten manure from an old hot-bed, with a little rough sand, and the pots plunged in the hot-bed. They should be watered when potted; but they will not require any more water until they begin to grow. The tubers of *Fuchsia fulgens* and *Salvia patens*, and the bulbs of *Achimenes longiflora*, may be treated in the same manner.

MARCH.

In this month turf is generally laid down, the ground having been first dug over, levelled, and rolled with a heavy roller. It is then slightly watered, if the weather happens to be dry; and the turf, which is brought to the ground in long strips rolled up, is laid down, the edges being carefully joined, and the pieces made to fit exactly. The turf is then generally beaten with a heavy beater, and carefully rolled. Where a lawn has been laid down a long time, it should be frequently rolled in this month, as lawns are very apt to become uneven during winter. The grass should now begin to be mown once a fortnight, as it is impossible to have a fine closely covered surface of grass without regular mowing: the rule is, once a month in winter, that is, in December, January, and February; and once a fortnight for the rest of the year. In warm moist seasons, the grass sometimes grows so fast as to require mowing once a week in summer; but in dry seasons the roots are apt to be burnt, and the grass killed, if it is mown too often.

In the flower-garden most of the plants will now require to be taken up, divided, and re-planted; a little fresh earth being given to them, and all the decayed parts cut out before they are re-planted. The seeds of half-hardy annuals, such as the China asters, Chinese pinks, French and African marigolds, everlastings, and ten-week stock, may now be sown in a slight hot-bed; and a few of the more hardy annuals, such as the sunflower, larkspur, lupin, convolvulus, candytuft, and poppy, may be sown in the open border; also some of the Cali-

fornian annuals, such as *Nemophila insignis* and *N. maculata*, *Gilia bicolor* and *tricolor*, and all the kinds of *Leptosiphon*. Carnations and pinks which were raised from layers last year should now be planted out where they are to flower. Box edgings should also be now planted, and gravel walks made where necessary. Old gravel walks which are in a bad state may now be raked or forked over, and then rolled, though this should never be done when the walks are wet.

In the open ground, the crocuses, hepaticas, and other spring plants are now in full flower; and in the shrubberies, the ash berberries, or mahonias, are in all their beauty. These plants, which have all been introduced within the last thirty years, are some of the most valuable additions that have been made for many years. One of the most splendid kinds is the holly-leaved ash berberry (*Mahonia Aquifolium*). It is an evergreen, and its leaves, which are of a beautiful dark shining green in summer, assume a purplish tinge in autumn and winter, and are of a beautiful yellowish red when they are quite young. The flowers, which are of a brilliant golden yellow, are produced in large clusters in March and April, and they are succeeded by clusters of dark purple fruit, covered with the most beautiful violet bloom. The plant is a native of California and Mexico, and, indeed, it is found on nearly all the north-west coast of North America, growing in rich vegetable soil in woods, where it forms a thick undergrowth. When it was first introduced into England, in 1823, the plants sold in nurseries at ten guineas each; and, as it could only be propagated very slowly by layers, the plants continued to be sold at a high price for several years. As, however, it is now found that it can be propagated by seeds, which ripen freely in this country, plants can be procured in most nurseries at sixpence each. There are several other kinds of Mahonia, the largest and most showy of which is called *M. fasciculatis*. It has bluish-green leaves, which look as if covered with a fine bloom, and its flowers are produced in great abundance. It is much taller than the other species, but it is rather too tender to live in English gardens without the protection of a wall; and as it does not ripen its seeds freely, it is still rather dear. Hybrid plants, however, have been raised by crossing this with some of the other species. *M. repens* seldom rises above two feet high; and *M. glumacea* has the peculiarity of producing its flowers in October.

MAHONIA AQUIFOLIUM.

In greenhouses the plants should be carefully examined, and re-potted when necessary, taking care that the fresh pots are quite clean and dry. Cuttings of greenhouse plants are frequently made at this season. The shoot should be cut off as smooth as possible, and planted in sandy soil, the earth being pressed firmly round it. The length of the cutting is generally about five or six inches, and two of the lower leaves are cut off with a sharp knife close to the stem. Cuttings of camellias and other hard-wooded greenhouse plants are generally made at this season from the points of the shoots, after the spring growth has been completed, but before the young wood has thoroughly ripened. The cuttings are generally planted about an inch deep, and covered with a bell-glass. Those of the different kinds of heath, being very difficult to strike, are generally made not more than one or two inches long, and they are planted in pure white sand, being then covered with a bell-glass, and the pot plunged in a hot-bed. Cuttings of cactus, mesemhryanthemum, and other fleshy-leaved plants, should be dried for two or three days before they are planted, as if they are put in the ground when the wound is fresh they will rot.

APRIL.

In the pleasure-ground and shrubbery, half-hardy shrubs are generally planted at this season. If they have been kept in pots, the ball of earth about the roots should be broken, and the roots carefully spread out before they are covered with earth, which should be to the depth of only from two to four inches, according to the soil; the greatest depth being necessary in the lightest soil. The Provence, white, and moss roses should now have their young shoots shortened to three or four buds; but the hybrid Provence roses should have five or six buds left; and the hybrid China, the Bourbon, and the Scotch roses, if intended for planting against a post, or a wooden frame, should have only the tips of their shoots taken off. The evergreen roses should be left at their full length; for if they are cut in they will produce long vigorous shoots, covered with an abundance of leaves, but having no flowers.

DIELYTRA SPECTABILIS.

In the flower-garden, the early-flowering dwarf kinds of dahlia may be planted; and as the auriculas will now begin to flower, they should be shielded, if possible, from the effects of the weather. The hardy annuals that were sown in March in the open border should now be thinned, and the seeds of the remainder of the hardy annual plants should be sown. In thinning the annuals that have come up, care should be taken not to pull up or loosen those which are intended to remain. Annuals should always be thinned according to their height, three or four of the larger kinds being left in each patch; while of the dwarf kinds it may be safe to leave as many as seven or eight. Some few annuals are worth the trouble of transplanting; but when this is the case, the hole in which they are to be put should be made with the point of the trowel, instead of using the dibber, as the latter instrument renders the earth on the sides of the hole so compact that it is impossible for the roots of a young and feeble plant to penetrate into it. Among the flowers which are most beautiful in this month may be mentioned *Dielytra spectabilis*, introduced by Mr. Fortune, from China, in 1846. It is quite hardy in ordinary flower-gardens; the stems dying down to the ground in autumn, and the roots remaining dormant until the following spring, when the plant again appears, and flowers in April, May, and June. It is readily increased by dividing the roots in spring when the young shoots begin to appear, or by cuttings taken off in summer. It will grow in any common garden soil; but the situation in which it is placed should be sheltered from high winds. This plant is, at present, scarce and dear. It is nearly allied to the fumitory, but its leaves resemble those of the tree pæony.

The greenhouse will require very little attention in this month, except as relates to watering the plants regularly, and giving them air. The plants that are coming into flower should be syringed over their leaves every other day till the flowers expand, when the syringing should be discontinued. In small greenhouses where there are vines, they begin to show flower-buds in this month.

In the conservatory, climbing plants are generally pruned and thinned at this season. The passion-flower should have its side shoots cut to within half an inch of the main stem; and this will occasion strong blossoming shoots to spring from the part left. Maurandyas may be treated in a similar manner; but most of the other greenhouse climbers will only require thinning. When camellias are required to blossom early, they should be placed, during this month, in a hot-house, or some other situation where they can be kept at a heat of from 50° to 60°; taking care that, while they are kept in this heat, they are regularly watered every day and their leaves syringed every other day.

MAY

In the lawn worms are often very troublesome during this month; and, to kill them, the grass should be watered with lime-water, made by mixing forty gallons of water with one peck of freshly-slacked lime. The mixture should be well stirred, and then suffered to stand till the sediment is deposited. The trees and shrubs which were planted in April should be frequently watered; the grass should be mown once a fortnight, and raked up, so as to cover the ground about the roots of the newly-planted trees, in order to keep them moist. The buds of the roses should be examined in this month, as they are very apt to have a small caterpillar in them, which, if not removed, will either destroy the bud, or, at least, prevent it from expanding.

WEIGELA ROSEA.

In the flower-garden, some of the hyacinths and tulips will probably have their leaves sufficiently decayed to come off when slightly pulled with the hand; and, when this is the case, the bulbs should be taken up and spread out on a mat in some dry airy place. The crocuses, snowdrops, and cornflags should, however, be left in the ground. The tubers of the tall-growing dahlias may be planted in this month; and when they are put into the ground care should be taken to place the eyes or buds uppermost, covering the crown with about three inches of soil. *Weigela rosea* is a new plant which flowers in this month, introduced from China, by Mr. Fortune, in 1846. It forms a handsome middle-sized bush, resembling the *Philadelphus*, or, as it is generally called, the *Syringa*, or mock orange, and it is quite as hardy as that well-known plant. The flowers of the *Weigela* are of a beautiful bright rose-colour; and they are produced in great numbers, hanging down in graceful natural festoons. The plant will grow well in any common garden soil; and it is propagated by cuttings, made at any time in the spring or summer. Though so recently introduced, it is so easily propagated that it is already advertised in some nurseries at eighteen-pence a plant. This plant is nearly allied to the fly honeysuckle. The half-hardy annuals and climbing plants, which were raised in hot-beds, may now be planted out in beds, previously prepared by digging in a coating of the remains of an old hot-bed, or of rotten leaves. If the plants, however, have been kept in the hot-bed where they were raised, they should be hardened, by placing the pots first in a greenhouse or cold frame, and then in the open air, first only in the middle of the day, and afterwards all day long, before the plants are taken out of their pots and finally placed in the open ground. In putting the plants into the ground, care should be taken to keep them at least a foot apart; and those that have long trailing branches should be planted with their branches to the north, the branches being pegged down immediately. As the art of pegging down judiciously is of the greatest possible importance to the beauty of a flower-garden, it is natural that amateurs should be anxious to know what to use for the purpose. Most gardening books say short hooked sticks; but these are not always to be obtained, particularly in suburban gardens. A correspondent of the *Gardeners' Chronicle* has lately recommended hair-pins, which answer the purpose very well, and which, though they may be despised by regular gardeners, are certainly very convenient for a lady, as they are very easily procured and easily managed. Another correspondent of the *Gardeners' Chronicle*, who despises the hair-pins, recommends taking pieces of bast mat, and twisting them so hard as to be able to force them into the ground; but this appears to me rather a difficult operation, and, as I have not been able to accomplish it myself, I think few ladies will be able to manage it, and that, therefore, it will be best for them to try the hair-pins, or to use small bent pieces of wire, prepared for the purpose, which are sold at some of the ironmongers. When plants are pegged down, the branches should be spread carefully over the beds, and the pegs placed at the joints.

Most of the greenhouse plants may be removed into the open air in this month; and, if they are to remain in pots, they are generally shifted about this time. When plants are re-potted, the earth should be shaken in, and gently pressed

down, but not too firmly: as, in one case, if hollow places are left between the roots and the pot, the roots will wither; while, in the other, if the earth is too compact, the roots will not be able to penetrate through it, and it will become impervious alike to air and water. Where vines are grown in a greenhouse, the berries will now be generally set, and experienced gardeners always thin them, as more grapes are produced on each bunch than can be ripened. It is, however, rather a difficult operation for an inexperienced person, as the bunches must not be touched by the hand, and, consequently, it is generally safer for amateurs to leave the bunches without thinning the grapes. It will be, however, necessary to prune the vines, as the shoots generally push out vigorously at this season, and consequently gardeners generally cut off the ends of the shoots, leaving not above two joints on each. The greenhouse should be kept warm and as moist as possible while the grapes are swelling; but the vines should not be syringed, the moisture being produced by pouring water on the floor.

A great many caterpillars are found at this season; and they should be sought for, and destroyed early in the month, while they are small, as they have done their principal mischief when they have attained their full size.

JUNE.

In the month of June there is very little to be done in the flower-garden. The work of preparation is over, and that of enjoyment has begun. In the pleasure-grounds, however, the lawn should be mown every fortnight, and rolled every week; and in the flower-garden the annual flowers should be tied up and cut in where it is necessary to make them appear neat. Carnations are now going into flower, and as the buds are very apt to burst on one side before they open, some gardeners separate the sepals regularly all round with a penknife; others, to prevent the calyx opening too far, tie a piece of waxed thread round the middle; and others cut a piece of cardboard so as just to encircle the calyx, so that when the flowers expand the petals appear to rest upon the card, and, of course, form a regular flower. Box edgings should be cut about the middle of this month, if the weather be moist; but, if the weather be dry, it is generally considered advisable to wait for rain, as box edgings which are cut when the weather is dry are very apt to look brown, and to die half-way down the shoots. Amongst the multitude of plants which are in flower at this season, the most ornamental shrub is decidedly *Ceanothus azureus*, which is now covered with panicles of flowers, of a brilliant celestial blue. It is a native of Mexico, whence it was introduced in 1818, and it flowers best when growing against a wall. In its native country its bark is considered useful in cases of fever. There are several other species of *Ceanothus*, and amongst them the common red root, or New Jersey tea (*C. americanus*). *C. azureus* is, however, by far the most ornamental species of the genus, and it may be procured in any nursery for about eighteen-pence a plant. *Ceanothus* is nearly allied to the genus *Rhamnus*.

CEANOTHUS AZUREUS.

As the greenhouse plants are now generally set out in the open air, the principal care that they require is to remove the dead leaves, and to prevent the roots from striking through the hole in the bottom of the pots. If any of the plants appear to droop when they evidently do not want water, they should be turned out of the pot on the hand, and their roots examined, as there is most probably a worm in the pot, which should be instantly removed, as worms in pots are very destructive by cutting through the roots. If any plants are kept in the greenhouse at this season, they should be frequently and carefully examined, as they are very apt to become infested with some kind of *Aphis*. They should also be watered and syringed every day, unless any chance to be in flower, when the syringing may be dispensed with.

In the vinery a moist atmosphere will be no longer requisite.

JULY.

Very little requires to be done in the shrubbery at this season; but evergreen plants may now be removed if they are watered immediately after transplanting. The rhododendrons and other plants which have done flowering should have their seed pods removed as soon as they are formed, as if they are allowed to ripen their seeds every season, they will become weak and die in a few years of premature old age. In hot dry weather, choice plants in the shrubbery should be watered; but it is of no use doing so unless the surface of the ground is first loosened. Plants should never be watered with cold spring-water, as it is always injurious, and in very hot weather positively dangerous. Where there is no other water, it should be exposed to the atmosphere for several days before it is used.

In the flower-garden, this is the season for making layers. A layer is the branch of a plant, which is twisted or wounded so as to prevent the free circulation of the sap, and to occasion an accumulation of it to be deposited in the part just above the obstruction, which is buried in the ground in the hope that the warmth and moisture by which it is surrounded may induce it to send out roots. In general the layer is cut half through at the bend, and sometimes it is partially slit up. Sometimes layers are made all round a plant, the branches being pegged down so as to form a circle round the main stem. Many plants are propagated in this manner, and, among others, verbenas and carnations. Cuttings are also made at this season; and what are called pipings, which are, in fact, cuttings of pinks and carnations. This is also the season for budding roses. When this last operation is to be performed, the bud is taken from a shoot of the current year; but the stock may be of several years' growth. The bud is cut out by making a transverse incision in the wood, a little below an eye, which is met by two longitudinal cuts, meeting a short distance above the eye, so that when the bud is taken from the scion, it is with a triangular piece of bark, attached to which should always be a small portion of the wood, which, however, must be removed before the bud is inserted in the stock. When the bud is prepared, two slits in the shape of an inverted T are made in the stock, and the bark on each side of the long cut being raised with a knife, the bark to which the bud is attached is slipped in, and tied in its place with bast mat; the principal care required in the operation being to make the horizontal edge of the cut in the stock fit exactly to the horizontal edge of the bud. One of the most beautiful shrubs now in flower is the *Leycesteria formosa*; as the deep green of its stem and leaves contrasts strongly with the reddish purple hue of the large bracteas which shade its white flowers. It is generally considered to be allied to the honeysuckles. The plant was originally introduced in 1824; but being little known, it was neglected and forgotten till it was re-introduced from Nepal, in 1836. It is quite hardy, and has the advantage of growing and flowering freely close to the sea. The tamarisk is another plant which will also grow close to the sea; but most other flowering shrubs are seriously injured by the spray.

LEYCESTERIA FORMOSA.

In the greenhouse there is nothing to be done this month, except in the way of cleaning it, by whitewashing, painting, &c., if the plants have been all removed to the open air. Many of the greenhouse plants may, however, be propagated by layers or cuttings, and, in particular, cuttings may be made of hydrangeas, camellias, shrubby cinerarias and calceolarias, and pelargoniums (geraniums); and the cuttings that were made in March should be potted off. Camellias may be also budded or inarched in this month. It may here be observed, that whenever cuttings of woody plants are made at this season, they should be taken off at the junction between the old wood and the new; and they generally grow so readily, that if pots be scarce, they may be planted in rich earth in a warm border, provided they are closely covered with a hand-glass. In making cuttings of camellias, orange and lemon trees, the sweet-scented daphne, and other woody greenhouse plants, however, pots should be preferred; and they are found to strike soonest if the even base of the cutting is made to rest against the earthenware bottom of the pot; and in this way much larger cuttings can be struck than could be done by any other mode.

In the vinery, the principal duty of the gardener is to keep a dry atmosphere while the grapes are ripening, and to guard against wasps and other insects. At this season, some gardeners cut off the side shoots of their vines.

AUGUST.

In the pleasure-ground and shrubbery the strong shoots of the coarser-growing shrubs should be shortened, or they will overpower the weaker ones. It is a very common fault, in planting shrubberies, to place choice and delicate shrubs near common coarse-growing ones, and then, in a few years, surprise is expressed that the valuable shrubs have vanished, and only the common kinds remain. The seed-vessels of the roses, rhododendrons, and other flowering shrubs, should be taken off as soon as the flowers have fallen, in order to prevent the ripening of the seeds, which would weaken the plants. If the flowers of all shrubs were removed as soon as the petals have fallen, the plants would not only be strengthened, but in many cases a second crop would be produced. Towards the end of the month, evergreen shrubs may be transplanted if they have completed their spring growth. Holes should be dug for re-planting before the plants are taken up, as evergreens should not be kept out of the ground a moment longer than can be avoided; the drying of their roots being very injurious to them. As large a ball of earth should be taken up with the plants as possible; and as soon as the plants are put into their places and a little earth thrown upon their roots, a quantity of water should be poured in through an old birch broom, a colander, or anything that will break the force of the water and prevent it from washing the earth away from the roots, and yet permit a sufficient quantity to be given to make the ground around the roots a kind of puddle. As soon as the watering has dried up a little, the earth should be filled in to the level of the ground, though it should not then be trodden; but after remaining four-and-twenty hours, it may be trodden down quite firm, and afterwards the surface dressed with a rake. In about a fortnight, if the weather should be dry, a good soaking of water should be given to the plants; and if the ground sinks at all, it should be filled up again level to the surface. If the weather should continue hot and dry, another thorough watering should be given at the end of another fortnight; and these waterings may be repeated occasionally, if they should be rendered necessary by the season, observing, however, that it is better to water the plants very seldom, and to give them a large quantity of water at a time, than to water them often, and to give them but a little each time.

In the flower-garden there is very little to be done. The flowering plants should be watered if they appear to droop; and the layers that were made from the carnations and pinks should be potted.

The greenhouse plants in the open air should be regularly watered every evening; and the auriculas may be repotted. Among the new plants that flower at this season may be mentioned the New Zealand speedwell (*Veronica speciosa*), which was introduced in 1843. It is a very showy plant, growing from three to six feet high, and producing large spikes of dark purple flowers. Though so lately introduced, it is already marked in some of the nurserymen's catalogues at eighteen-pence a plant. It is very nearly hardy, but it succeeds better when planted in a conservatory than in the open air, unless it is in a warm sheltered situation.

VERONICA SPECIOSA.

In the vinery, the grapes will now be ripe, and moisture and dust should both be guarded against till they are cut. As soon as the grapes are all removed, the leaves of the vines should be well syringed, and the plants watered at the roots.

SEPTEMBER.

In this month the principal thing to be attended to in the shrubbery is to endeavour as much as possible to harden the tender trees and shrubs; and the only way to do this is to keep the roots as dry as possible, and to expose the branches to the full influence of the sun and air. Where half-hardy trees are grown against a flued wall, the fire should be continued at this season, though the

flowers are all over and even the leaves are beginning to fall, in order to ripen the young wood, that it may produce flower-buds for the ensuing year. Tender plants that have been grown in a dry soil, and have had their wood well ripened, will bear a much greater degree of cold than half-hardy plants which have been grown in a damp close situation, with stagnant water about the roots.

In the flower-garden, the annual plants which have done flowering should be pulled up and thrown away, as nothing can have a more wretched appearance than long, dry, leafless stems; and the bed from which they have been removed should be raked smooth. Beds for hyacinths and tulips should be prepared by trenching them two feet or three feet deep, if the soil will admit of that being done without breaking into the sub-soil; and at about eight inches from the surface should be laid a thick stratum of strong loam and rotten manure well mixed. The beds should then be filled up with lighter loam, and left to settle for four or five weeks. Beds for ranunculuses and anemones are also sometimes prepared at this season, though it is better in most soils to postpone making them till February. There are, perhaps, few genera that have so great a variety in their flowers as the *Anemone*. The common garden anemones, as is well known, are of different shades of pink and purple; the wood anemone is white; the *Anemone palmata* of a brilliant yellow; and *A. apennina* of a celestial blue. But none of these flowers, though they are all beautiful, can be compared in splendour with the *Anemone japonica*, the flowers of which are of a bright rose colour, and as large as a rose of the kind called *Rosa gallica*. This splendid plant, which is quite hardy, and which grows in favourable situations to the height of three or four feet, was introduced from China, by Mr. Fortune, in the year 1844; and though it was at first kept in the greenhouse, it is now found to produce larger and finer flowers in the open air in this month. In Japan, it is said to be found in damp woods, on the edges of rivulets; but it appears also to grow in mountainous places, both in Japan and China. Though so recently introduced, it may be procured in most of the nurseries at nine-pence a plant.

ANEMONE JAPONICA.

In the greenhouse, some of the more tender kinds of plants should now be housed, particularly the pelargoniums, the succulent plants, and the oranges and lemons. When the plants are first taken into the house the glasses may be left open night and day, but towards the end of the month they should be closed about five o'clock in the afternoon, and not opened again till about eight the following morning. If vines are grown in the greenhouse, the plants should not be taken into the house till the grapes are all gathered. Greenhouse plants should be pruned and cleaned before they are taken into the house, and well syringed, to clear them from insects. In this month the Cape bulbs should be potted, and put into a cold pit. If any cuttings of hydrangea, or other plants, were made and put into the open border in July, they should now be potted and placed in a cold pit.

Some gardeners prune their vines at this season; as they say the buds are strengthened by their doing so, and a better crop is produced the following year.

OCTOBER.

October is rather a busy month for the gardener, as it is the season for laying out grounds, planting shrubberies, &c. Directions have already been given for planting evergreens, and the same plan may be pursued with deciduous shrubs. It is a great but very common fault in planting shrubberies, to place the plants too near each other. The choice plants, that are intended to remain, should be at such a distance as to allow for ten years' growth before they touch, and the intermediate space should be filled up with common plants, a few of which should be cut down every year as the other plants grow. By this treatment the shrubbery will never have a bare and desolate appearance, and the fine plants will be allowed to assume their proper forms and habit of growth. Care should also be taken not to plant the shrubs which are to remain too near the walks, as if they are badly placed in this respect, they will, in a few years, either require to be cut in so as to spoil their shapes, or they will overhang the walks so as to destroy half the enjoyment of the garden. When roses are planted, a pit should be dug for each, about two feet deep every way, and very rotten manure or thoroughly decayed leaves should be mixed up with the soil when the roses are planted. Roses that are already in the ground should have very rotten manure or thoroughly decayed leaves laid over their roots, on the surface of the ground. Every fifth or sixth year roses should be taken up and their roots shortened, after which they should be replanted in fresh and very rich soil.

CESTRUM AURANTIACUM.

Hyacinths, tulips, crocuses, and several other bulbous and tuberous-rooted plants grown in the open ground, should be planted at this season, the hyacinths and tulips being planted in the beds prepared for them in September.

All the greenhouse plants should now be taken into the houses, and those plants which have done flowering should have as little water as possible, so as to prevent them from drooping; while, on the other hand, the chrysanthemums, and other plants which have not yet flowered, should have a great deal of water at this season, to assist them in perfecting their buds. The cuttings which were made of greenhouse plants intended for the open border the following summer, should now be put into cold pits to preserve them during the winter. The Cape bulbs, and the bulbs of *Agapanthus*, *Crinum*, and the beautiful Japan lilies, may now be potted and placed in a cold pit, where they will flower about the same time as those will do which are planted the following spring in a hot-bed. *Cestrum aurantiacum*, or the orange-coloured cestrum, is an exceedingly beautiful greenhouse plant, which was introduced by Mr. Skinner, from Guatemala, in 1843. Its flowers, though they are called orange-coloured, are, in fact, of the colour of a ripe apricot, a very unusual tint among flowers, and they have a strong perfume of orange-peel. They remain a long time on the tree without fading, and when they drop they are succeeded by snow-white pear-shaped berries, which are almost as ornamental as the flowers. The leaves are also very handsome, and of a dark shining green. The genus *Cestrum* was comparatively little known before the introduction of this beautiful plant; it belongs to the nightshade family.

NOVEMBER.

In the pleasure-ground and shrubbery the dead leaves should be swept up as they fall and carried to some place where they can lie to rot, being turned over occasionally while they are in a state of decay. If there is no snow on the ground the gravel walks may be raked over to destroy the moss, and then rolled; and the lawn may be rolled. Roses should be pruned at this season when they are intended to flower early, and each kind requires a different mode of pruning, as mentioned in April. It must be observed, however, that only the hardy roses will bear pruning at this season. The Scotch roses, the sweet briars, and the various kinds of climbing roses, should have only the tips of their shoots shortened; and the Bourbon and China roses, &c., should not be pruned till spring. Even at this season some shrubs are in flower in the open air; and amongst them may be mentioned *Garrya elliptica*, a handsome evergreen shrub, a native of the western coast of North America. The plant was introduced by Douglas in 1828, and it was long supposed to be the only species in the genus, the genus itself being so distinct that it cannot be placed in any known order. Lately, however, two or three other species have been introduced. For some years this plant continued scarce and dear, so that in 1838 plants were a guinea each: but they have now been so much increased by the quantities of seed imported, that they may be obtained at eighteen-pence each.

GARRYA ELLIPTICA.

There is scarcely anything to do in the flower-garden, except that tulips, hyacinths, crocuses, and some other similar bulbs, may still be planted if they were neglected in October.

DECEMBER.

Very little can be done in the garden at this season, as the ground is generally covered with snow. As long as the frost continues the snow is not injurious to plants, but rather beneficial to them, as it serves as a covering to keep them warm; but as soon as it begins to melt, it should be thrown off the flower-beds and lawn, as snow water is so particularly cold and chilling that it will kill not only delicate flowering plants but the finer kinds of grasses.

In the flower-garden the half-hardy plants will only require to be protected; and in the greenhouse and cold pit the same rules must be attended to as in November.

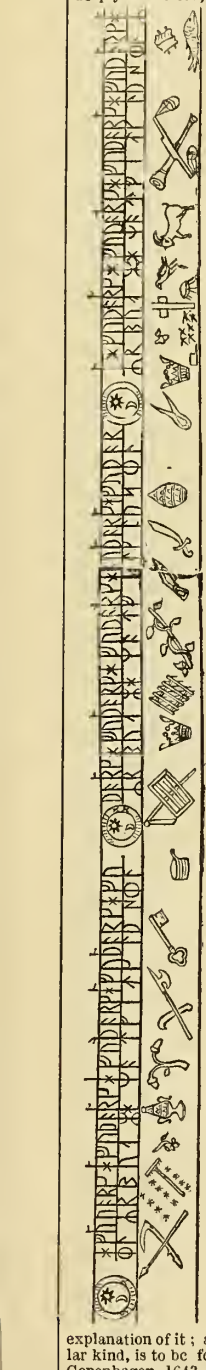
Daphne Fortuni is a beautiful greenhouse plant, very nearly allied to the common Mezereon, which flowers in England in December and January, though in China it is in full flower in March and April. It is at present extremely rare, but as it appears to strike freely from cuttings, it will probably soon become sufficiently abundant to try if it will stand the English winters in the open air, in which case it will probably blossom at the same time as in China. It was introduced in 1844 by Mr. Fortune.

DAPHNE FORTUNI.

THE HOURS LEADING OUT THE HORSES OF THE SUN.

Calendars, Almanacks, Wakes, and Fairs.

In former times, when the parish priest could scarcely con his missal, and when the felon who could read his "neck verse" was allowed the benefit of clergy, from his thus giving legal proof of his being a "clerk"—"*legit ut clericus*;" when a knowledge of the first four rules of simple arithmetic was a sufficient qualification for the office of Chancellor of the Exchequer; and when the wise man who could predict an eclipse of the sun or moon, always lay under the suspicion of practising the black art, what kind of Almanack was in use, and how did the husbandman mark the times of earing and of harvest, of sheep-washing and sheep-shearing, and of Wakes, Fairs, and Church Ales—matters in which he was deeply interested, both on the score of business and of pleasure?



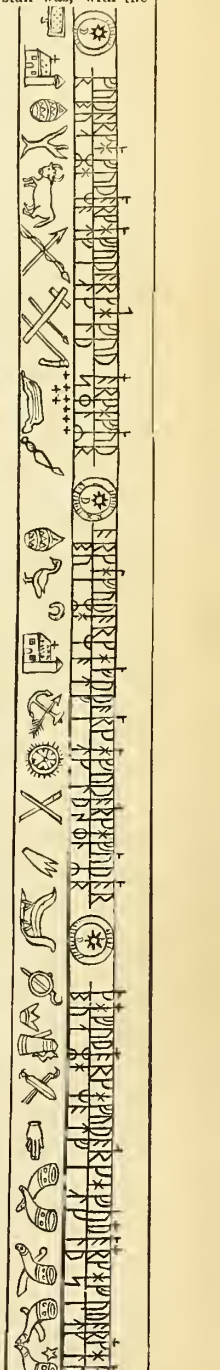
It is unnecessary, here, to enter into any disquisition respecting the etymology of the word "Almanack," or the time when it began to be popularly used in Europe; it may be sufficient to remark that the thing, under the name of a Calendar, was known in this country at an early period; and that, in its general arrangement, the Calendar prefixed to a book of prayers, about the time of the Conquest, differed but little from a common Almanack of the time of James I. In some of those ancient Calendars there was a drawing at the commencement of each month, showing how the husbandman was usually employed at that particular period. For instance, in JANUARY, which the Saxons called *Giul aftera*—the month after *Yule*, or Christmas—there was the figure of a man drinking from a horn, representing the New Year festivities. FEBRUARY, *Sproutkele* (cabbage-sprouting), or *Solmonath*, Cake Month—a man sitting idly on a bench, at the door of a house, the weather not yet permitting him to pursue his labour regularly. MARCH, *Lenct Monath*, Spring Month—a man digging. APRIL, *Oster* or *Easter Monath*, the month in which Christ's *eastering* or *rising* from the dead was commemorated—a man pruning a tree. MAY, *Trimilki*, Three Milkings, from the cows being milked thrice a day in that month, during the flush of the grass—a man pruning a vine. JUNE, *Weyd Monath* and *Mede Monath*, Meadow Month—a man weeding. JULY, *Hey Monath*, Hay Month—a man mowing. AUGUST, *Arn Monath*, Harvest Mouth—a man reaping. SEPTEMBER, *Gerst Monath*, Grist or Grinding Month—a man thrashing out corn for grinding. OCTOBER, *Wyne Monath*, Wine or Vintage Month—a man pouring wine from a flagon into a drinking cup. NOVEMBER, *Wind Monath*, Windy Month, also *Blut Monath*, as in this month they killed their cattle and swine for winter provision—a man killing a pig. DECEMBER, *Winter Monath*, and *Giul cora*, Ere or First Yule—a company feasting, indicative of the festivities of Christmas or Yule.

In those old Calendars, the names of the saints were inserted under their respective commemoration days; and such days as were more particularly observed by the Church as high festivals, were distinguished by being written in red ink, and hence the term "red-letter day," signifying a holiday. As the deaths of kings, popes, bishops, abbots, and other eminent persons, and also the dates of memorable events, were frequently inserted in those Calendars, they thus became, to a certain extent, Historical Recorders as well as Remembrancers of Times and Seasons. The introduction of astronomical observations and computations into the Calendar was probably owing to the circumstance of Easter Sunday having to be reckoned from the first new moon that occurred after a certain day. As Astronomy and Astrology were intimately associated in popular opinion, prognostications of the weather, and predictions of political events—"founded on the aspects of the heavenly bodies"—followed as a matter of course; but the seers were so frequently wrong in their foretellings, that "to lie like an almanack-maker" was proverbial in the time of Queen Elizabeth, long ere the art of "figure-flinging" had attained the *ne plus ultra* of systematic mendacity in the person of William Lyly.

The oldest printed Almanacks appear to be those called "Wand Kalendars"—Wall Calendars, or, as we now call them, "Sheet Almanacks"—engraved on wood, in the manner of block-books, and printed in Germany, about 1470. Till about the close of the fifteenth century, it would seem that this branch of the cheap book trade was chiefly in the hands of wood-engravers, who at that period appear to have travelled from place to place for the purpose of vending their productions. Previous to the introduction of printed Almanacks, "*Clog* Almanacks" were in common use in Denmark, Sweden, Norway, and England, and continued to be used by the poorer classes, and such as could not read, until comparatively recent times. These Almanacks obtained their distinctive name from their being formed of a *Clog* or piece of wood, on which were cut various marks, indicative of the days of the week and month, and of the Principal Fixed Terms and Festivals. Clog Almanacks inscribed with Runic characters appear to have been known to the people of Northern Europe, previous to their conversion to Christianity.

Dr. Robert Plot, in his "Natural History of Staffordshire" (folio, 1686), gives an engraving of "a Clog, or Staffordshire Perpetual Almanack," together with a copious explanation of it; and an ample account of ancient Danish Calendars, of a similar kind, is to be found in the "Fasti Danici" of Olaus Wormius, printed at Copenhagen, 1643. Verstegan, speaking of the Anglo-Saxons, says:—"They used to grave upon certain squared sticks, about a foot length, or shorter or longer as they pleased, the courses of the moons of the whole year, whereby they could always certainly tell when the new moons, full moons, and changes should happen, as also their festival days." In Almanacks of this kind, a period of three months was usually inscribed on each side. The different marks were arranged in three columns; the first column contained the days of the month, in a repeated series of marks, in the same manner as the Dominical Letters; the second column contained marks corresponding with the Golden Numbers, for the purpose of ascertaining the phase of the Moon; and the third was occupied with emblematical marks, expressive of "tides" and seasons and of the greater festivals and saints' days.

In Denmark, Swedon, and Norway, Runic Calendars were of various forms; sometimes carved on a piece of bone, and sometimes on thin pieces of wood, which were afterwards fastened together at one corner, by means of a peg or a thong, and were thus moveable, like the leaves of tablets. The most common form, however, of such Calendars was that of a staff, either squared at the sides or cylindrical; and the usual name for such a staff was, with the Danes, *rimstok*, and with the Norwegians, *primstaf*: the former term, according to Wormius, signifying simply a calendar-staff, and the latter a staff for finding the *prim*, or New Moon. A curious cylindrical staff of this kind was exhibited by Sampson Hodgkinson, Esq., at the meeting of the Archæological Institute, held at Lincoln, in July, 1848. It was about three feet eight inches long; and the Calendar was inscribed upon it in two divisions, commencing at the top, and extending down to the bottom, the one-half of the area being occupied with the six months from January to June inclusive, and the other half with the six months from July to December. The characters and emblems inscribed on the division comprising the latter six months are shown in the annexed cuts. The cut on the left shows the months July, August, and September; and that on the right, the months October, November, and December. In the original the inscription is a continuous line. The marks are arranged in three columns: the column, in which the characters are closest together, shows the days of the month; the second contains the Golden Numbers; and the third and widest contains the emblems of tides, festivals, and saints' days. It may be observed that most of those emblems are not placed exactly under the day of the calendar month to which they belong. In the column of days in the cut to the left, the first character that occurs is that which corresponds with G in our series of Dominical Letters; the second in the same column, that which corresponds with A; the third, B; the fourth, C; the fifth, D; the sixth, E; the seventh, F. All the rest of the days, to the end of December, are thus marked by a repetition of the same series of characters. The commencement of each month is denoted by a circle containing the figures of the Sun and Moon. The months are not lunar; but contain, respectively, the same number of days as our present calendar months. On the characters in the second column, denoting the Golden Numbers, it is unnecessary to make any remark, further than that they are letters of the Runic alphabet, and that they here represent numbers. The following is an explanation of some of the emblems in the third column, commencing with JULY in the cut to the left, and continuing on through each succeeding month till the end of the year;—JULY: St. Margaret's day, a rake, indicative of the time of hay-harvest. St. Mary Magdalene's day, a kind of vase, representing the vessel containing the precious ointment with which she annointed Christ's feet. St. James's day, two acorns, relating to an ancient northern superstition which, according to Wormius, ascribed the origin of acorns to that day. St. Peter *ad vincula*, a key. AUGUST: St. Laurence, a gridiron, with an instrument like a flail behind it. The Assumption of the Virgin, a crown. St. Bartholomew, a knife, the instrument with which he was flayed. At Croyland Abbey, in former times, it was customary to give away small knives on St. Bartholomew's day. The Decollation of St. John the Baptist, a sword. SEPTEMBER: St. Giles, a pair of sheep-shears, because about that time they usually clipped their sheep. The Nativity of the Virgin, a crown. Holyrood Day, a cross. Michaelmas, the Archangel's trumpet and a pair of scales, denoting the Equinox. St. Francis, a fish, because about this time the fishery was productive. OCTOBER: St. Bridget of Sweden, a wool-card, because about this time the farmers' servants were employed in carding wool. St. Calixtus, a leafless tree, denoting the fall of the leaf. In some calendars the emblem referring to this day was a glove, denoting the increase of the cold. St. Luke, an ox. NOVEMBER: Martinmas, a goose. In former times, the feast of St. Martin, of Tours, was generally commemorated with roast goose at dinner in England; the custom is now chiefly observed at Michaelmas. St. Clement, an anchor with an arrow across the shank. St. Catherine, a wheel. St. Andrew, St. Andrew's cross. DECEMBER: St. Nicholas, a ring, and pastoral staff. Conception of the Virgin, a crown. St. Thomas, a hand, relative to the incredulity of St. Thomas, who declared that he would not believe to the resurrection of Christ, except he should thrust his hand into his side. Christmas tide or Yule, drinking horns, denoting the festivity of the season: the sword crossing the horn which stands singly is the indication of Innocents' day. In the preceding explanation, the emblems are arranged according to the months under which they appear in the engraving, and not with reference to the precise time at which their corresponding festivals are now observed.



In the middle ages, periodical times were marked rather by the occurrence of Saints' days or Festivals than by the days of the month: thus, the sittings of the Courts of Law, and the return of writs, were always regulated by the vigil, morrow, or octave of a particular festival; and by these the tenant paid his rent, either in money or goods, at Christmas, Candlemas, Lammas, Michaelmas, or Martinmas, according to the conditions of his tenure, without any reference to the day of the month on which each festival was kept. Amongst the old Term days, it is believed that May

Day is the only one which is not specifically distinguished hy being associated with a festival or office observed by the Church. Though the derivation of Lammas, from *Loaf-mass*, he doubtful, it is evident that tho period was originally determined hy the celehration of some Mass or other religious office on that particular day. Candlemas, which is the anniversary of tbe Purification of the Virgin, ohtained its popular name from churches and chapels being hrilliantly lighted up with tapers, and from tapers and candles being hlessed hy the priest, on that day. It may here he observed that the word Mass, ahout the etymology of which there have been so many conjectures, is of Gothic origin; and that, in its primary meaning, it is nearly synonymous with the word *Mess*, as still used in the navy to signify a *community* of persons who take their meals together. Tbe Latin word *Communio*, and the Saxon word *Houseling*, are suggestive of the same idea as the word Mass. This hrings us in regular concatenation to the "Kermes"—the Kirk or Church-Mass of the Dutch and Flemings, which is identical in its origin with the English Wake or Feast.

Of the Dutch and Flemish Kermes it is not our intention here to speak, further than it may serve to illustrate tbe origin of the English Wake or Feast. The Kermes is a kind of fair, which some attend for husiness, some for pleasure, and otbers for the sake of hoth. It obtained its name, Kermes—Kirk-mass, Church-mass—in consequence of its heing originally held on the anniversary of the saint to whom the village or parish church was dedicated. Tbe term "Kirk," which has erroneously been supposed to he derived from two Greek words, κυριου οἰκος—the House of the Lord—originally signified, with people of both Gothic and Celtic origin, a *circle*, a word which, in fact, is derived from the same root; and as their places of worship were usually *Kirks*, or *Circles*, of stones, the same term continued to be used to signify a place of worship after their conversion to Christianity. The Latin adverh *circum* (Kirk-um) is formed from the same root; and its component parts express the same idea as the English word "round-ahout"—*Kirk*, Celtic, a *round* or *ring*, and *um*, German, *about*.

The institution of the English Wake or Feast was in its origin precisely the same as the Dutch and Flemish Kermes; it was a festival held in commemoration of the saint to whom the parish church was dedicated. The difference in the names given to it—Wake and Feast—originated merely from the circumstance of the commemoration heing chiefly observed in some places on the *Wake*, *Vigil*, or day preceding the saint's day, and in others on the day itself. Though this be the real origin of the Village Wake or Feast, yet, in later times, the day was not unfrequently changed for various reasons; such as its happening in the time of hay-making or of harvest, when its celehration might interfere with lahours which could not he conveniently postponed; from its happening immediately hefore or after the Wake of an adjacent parish; or *quâcumque alid ratione*—"for any other reason why." Such is the origin of our Village Wakes and Feasts, which in the progress of society are gradually hecoming ohsolete.

It was in large country parishes that Wakes and Feasts were usually commemorated witb the greatest display: for as on those days all the parishioners were reqnired to attend the parish church, the same as at Christmas and Easter, there was, consequently, a great assemblage in the village where such church happened to he situated; and as the original institution partook more of the anniversary of a jovial roof-raising than of a day of mortification, the natural consequence was that those nominal Wakes and Feasts hecame Feasts indeed. On those occasions the inhahitants of the "church town" were in duty, or in interest, hound to entertain their relations, friends, and customers who lived at a distance. At such times every "responsible" man in the village made provision for a crowd of visitors; and even those whom he was most slightly acquainted with, from having rnhhed shoulders with them at a fair, were allowed, or rather privileged, on the Feast-day, to partake of his hospitality. When on such occasions the tailor or the weaver gave heef, bread, and a cup of ale of a fortnight old to tbe shepherd who had looked after his skep of hees on the distant common, he was merely re-paying an ohligation. The smith, as a matter of course, was hound to entertain every man in the parish who kept a horse.

Philip Stuhhes, in his "Anatomie of Ahuses," thus speaks of Wakes and Feasts, at the time of the puhlication of his hook, 1583:—

"This is their order therein; every town, parish, and village, some at one time of the year, some at another (hnt so that every one keep his proper day assigned and appropriate day to itself, which they call their Wake-day), usetb to make great preparation and ordenance for good cheer. To the which all their friends and kinsfolks, far and near, are invited; where is such gluttony, such drunkenness, such saturity and impletion used as the like was uever seen. In so much as the poor men who hear the charges of these Feasts aud Wakes are the poorer and keep the worser houses a long time after. And no marvel; for many spend more at one of these Wakes than in all the whole year hesides. This makes many a man to thripple and pinch, to run into deht and danger, and finally hrings many a one to utter ruin and decay." To the query "From whence sprang these Feasts and Wakes," tbe author, who was utterly averse to all the institutions of the old Church, and greatly inclined to consider them as Pagan relics, answers as follows:—"I cannot tell, except from the Pagans and Heatben people, who, when they were assemhled together, and had offered sacrifices to their wooden gods and blockish idols, made feasts and hanquets togetber hefore them, in honour and reverence of them, and so appointed the same yearly to be ohserved in memorial of them for ever. But whencesoever they had tbeir exordium, certain it is that the devil was the father of them, to drown us in perdition and destruction of hody and soul; which God forefend."

Wakes and Feasts were not exclusively devoted to eating and drinking; hut were also celebrated with sports and pastimes. There was dancing to the pipe and tabor from morn till eve; aud after dinner, when the spirits of tbe champions had been stimulated hy heef and bread, and cakes and ale, the wrestling and the cndgel play commenced. The prize for the wrestling was frequently a ram. The miller, in Chaucer's "Canterbury Talea," seems to have heen a frequent victor in those contests:—

> The Miller was a stout carl for the nones,
> Ful bigge he was of braun, and eke of bones;
> That proved well, for over all ther he came,
> At wrastling he would hear away the ram.

Millers, when they take to the aport, usually prove good wrestlers. One of the most celehrated of the Cumherland wrestlers, recorded in "Litt's Wrestliana," was a miller; and his skill in laying men on their back is said to have heen chiefly derived from his practice of lifting sacks of flour.

What were called Church Ales appear to have heen very nearly allied to Wakes and Feasts. Whatever might have heen their original institution, tbey seem to have heen held for the exclusive benefit of the Church. "The manner of tbem," says Philip Stubbes, "is thus: in certain towns where drunken Bacchus bears the sway, against Christmas and Easter, Whitsunday or some other time, the Church-wardens (for so they call them) of every parish, with the consent of the whole parish, provide half-a-score or twenty quarters of malt, whereof some they buy of the church stock, and some is given them of the parishioners themselves, every one conferring somewhat, according to his ahility; which malt being made into very strong ale or beer, is set to sale, either in the church, or some other place assigned to that purpose. Then when this *Nippitatum*, this Huff-cap (as they call it), and this nectar of life, is set abroach, well is he that can get the soouest to it, and spend the most at it, for he that sittetb the closest to it and spends the most at it, he is counted the godliest man of all the rest, and most in God's favour, because it is spent upon his Church forsooth: but who either for want can not, or otherwise will not stick to it, he is counted one destitute both of virtue and godliness. In so much, as you shall have many poor men make hard shift for money to spend thereat. And good reason; for heing put into this *Corban*, they are persuaded it is meretorious, and a good service to God. In this kind of practice they continue six weeks, a quarter of a year, yea, half a year together, swilling and gulling night and day, till they he as drunk as rats, and as hlockish as heasts." The pretext for holding those Chnrch Ales was, to ohtain money for the repair of the church, to huy service-hooks, cups for the celehration of tbe sacrament, surplices for the parson, and such other neceaaaries. "But," saya Stuhhes, "who seeth not that they hestow this money upon nothing less than in huilding and repairing of churches and oratories? For in most places lie they not like swine-cots (pig-styes)? Their windows rent, their doors broken, their walls fallen down, their roof all hare, and what uot, ont of order? Who seeth not the hook of God, rent, ragged, and all hetorn, covered in dust, so as this epitaph may he writ with one's finger upon it, *Ecce nunc in pulvere dormio*—'Behold, I sleep in dust!'"

Fairs—like Wakes, Feasts, and Law-days—were, in former times, usually appointed to he held on the anniversary of some saint; and there is reason to helieve that in many places, which in course of time had increased from small villages to considerable towns, the Wake or Feast was tbe origin of the customary fair. Fairs are of great antiquity; and it has hcen conjectnred that, in the southern provinces of France, where we first find them expressly mentioned, tbey were merely a continuation of tho *nundinæ*, or periodical markets of the Romans. Sidonius Apollinaris, Bishop of Clermont, who died in 488, speaks of a fair, in one of his epistles addressed to the Bishop of Troyes. During the period of the Crusades, the principal Continental fairs, more especially in France, hecame of more importance than in former times, both from tbe nurnber of pilgrims and fighting men who were accustomed to take them on their way to the Holy Land, and from tbe increased commerce of Europe with tbe East consequent on those expeditiona. As marts for general traffic, the great European fairs, such as those of Troyes, Rheims, Brnges, and Ghent, began to decline from ahout the latter end of the fifteenth century. At these fairs the Merchant Princes of Italy had their factors, who not only hought and sold on account of their principals, hut also acted as bankers, discharging hills of exchange drawn at distant places, and there made payable, and granting others to merchants, who, having disposed of their goods, were either returning homewards, or proceeding, for the purpose of making purchases, to some other fair. In England, at a time when it was unlawful to export the coin of the realm, a merchant intending to visit one of tbe great Continental fairs, provided himself with a hill of exchange, drawn by an Italian factor upon auotber agent of his own firm attending tbe fair in question, and there made payahle at sight. As the merchant requiring the hill always paid the money for it, in the first instance, to the drawer, the acknowledgment of its receipt in the hill gave rise to the formal words, "value received" in modern hills of exchange on account of goods sold and delivered.

When we first hear of Fairs of considerable importance in this country, they were held either by a Royal grant or through ancient custom; and the profits arising from tbe tolls and the standings were usually enjoyed either hy the feudal superior of the place where the fair was held, or hy the abhot and hretbren of some neighbouring monastery. As horoughs began to he incorporated, the right of holding fairs, and of enjoying the customary profits, was usually confirmed to the hurgesses by charter. To each considerable fair there was attached a court of *pie-poudre*, for the prompt settlement of such disputes as might occur during its continuance. In the reign of Edward IV. an act was passed to prevent encroachments of the courts of *pie-poudre*, "which," says Barrington, in his "Observations on the more Ancient Statutes," "like most other courts, wanted to extend its jurisdiction, or, in other terms, the profits arising from it. As these lowest of courts of justice were under the direction of the steward, or auditor of him who had the grant of the fair, tbe steward, hy way of drawing every litigation to his own court, supposed, by an ingenious fiction, that parties who never made any contract at the fair, and who perhaps lived at a great distance, had made the hargain in dispute within the limits of his jurisdiction, and, by this means, claimed conusance of the suit." The term *pie-poudre* (*pied poudreux*) literally signifies "dusty foot;" and it is supposed to have heen given to the court in question, in consequence of the dusty feet of the suitors. It may, however, be ohserved that "dusty-foot" was an old name for a pedlar; and there is reason to helieve that the aame class of people were called *pieds-pouldreux* in old French, before such courts were instituted, or at least before they had acquired their distinctive name. If this opinion be correct, the pedlar, or travelling merchant, was a "dusty-foot," and the Court of Pie-poudre, a pedlar's court.

In the middle ages, the principal letter-carriers were traders attending fairs, and pilgrims visiting shrines, holy wells, or other places supposed to enjoy the special favour of some saint. In the 15th century pilgrimages were fashionable; and in those days a visit to the shrine of Saint Thomas à Becket, at Canterbury, or to the Chapel of Our Lady at Walsingham, was not much unlike a trip to Bath ahout the middle of the last century.

In former times, it was at fairs that the monks purchased many of the commodities which they required; and as they were also extensive landowners, it was on such occasions that tbey usually sold the produce of their farms, more especially their wool. Before the establishment of a fair and market at Hull, the Abbot of Meux or Melsa, in Holderness, appears to have attended Boston Fair. In the latter part of the reign of Henry III, the Abbot of Melsa was charged with having unlawfnlly sold, at Boston Fair, one hundred aud twenty-nine sacks of wool to foreign merchants, at a time when the exportation of wool was forbidden to such merchants, in consequence of a dispute hetween the King of England and the Countess of Flanders. Even the canons of Boltou Abbey, in the retired vale of Wharfe, were accustomed to make purchases of wine, cloth, and other articles, at Boston Fair. This fair, and also that of Stourbridge, appear to have been attended hy manufacturers of woollen cloth from the distant town of Kendal, who, after disposing of their goods, invested the proceeds in the purchase of various articles which either might be required in their own neighhourhood, or which might he likely to meet with a ready sale in the course of their journey homeward. Travelling merchants, in their progress to a distant fair, freqnently received commissions at the ahbeys and castles where they were accustomed to call, to make purchases on account of the owners and their dependants.

In the mythology of Greece and Rome, Apollo, typified as the Sun, was the great ruler of the year, and the personified seasons (ὡραι, Hours) were his attendants. In the cut (on page 58) he has twelve attendants, the personified hours of the artificial day.

HINTS FOR THE TABLE.

BY M. SOYER.

Amongst all the tribulations of the table, carving is not the least of them. "If you should, unhappily, be forced to carve at table," says Launcelot Sturgeon, in his "Essays, Moral, Philosophical, and Stomachic," "neither labour at the joint until you put yourself into a heat, nor make such desperate efforts to dissect it as may put your neighbours in fear of their lives; however, if any accident should happen, make no excuses, for they are only an acknowledgement of awkwardness." As an instance of this, we remember to have seen a man of high fashion deposit a turkey in this way on the lap of a lady; but, with admirable composure, and without offering the slightest apology, he finished a story which he was telling at the same time, and then, quietly turning to her, merely said, "Madam, I'll thank you for that turkey!" My conscience will not allow me to swear to the authenticity of the fact; but, in the course of twelve months past, I have witnessed a very similar instance; only the party, not possessing the assurance of the fashionable above mentioned, did not continue the conversation, but, in his nervous anxiety, endeavouring to replace it on the dish with vivacity, sent it rolling across the table to his right-hand neighbour; who, quickly perceiving the imminent danger in which he was placed, fortunately arrested its further progress with his fork. One hearty laugh of the remaining party terminated this scene of confusion.

After a short consideration, I found, by a most simple rule, and with the greatest facility, that a bird that would take ten minutes to carve very badly, may be done well in two or three, by the most inexperienced person. From this process a number of advantages may be derived; first, you may eat your dinner much hotter; secondly, you can make eight or ten pieces of a fowl, or any other bird, where previously great difficulty was experienced in making five or six, and each person will thereby be enabled to choose a favourite piece; and a large bird—such as turkey, poularde, capon, &c.—will be fit to re-appear on your table in a very inviting state. I must also observe that the birds are not in the least disfigured; but, on the contrary, their appearance is much improved. Formerly, nothing was more difficult to carve than wild-fowl, the continual motion (when alive) of the wings and legs making the sinews almost as tough as wires, puzzling the best of carvers to separate them. My new method for small birds has quite abolished such a domestic tribulation, by separating, with a long pointed pair of scissors, the sinews which join the wing to the breast, and also jointing the legs under the skin, as explained below for larger birds. The separation of the joints may be easily effected; and having thus detached the four principal parts, the carving, when roasted, will be very simple. But for the jointing of turkeys, geese, capons, &c., the tendon separator, made by Bramah and Prestage, Piccadilly, will be found a happy relief to carvers. Its object is to relieve carvers, more or less proficient; and must become indispensable for the use of all cooks and poulterers in disjointing the volatile species, previous to trussing, roasting, or boiling.

The simplicity of the operation will easily convince any one that the tendon-separator possesses all that is required to remove awkwardness in carving, the only necessity being to divide the tendons in the joints, the toughness of which is the difficulty to be overcome, and often abandoned to make a desperate cut at the bones: hence arise the accidents above mentioned.

When about separating the tendons, and otherwise dividing other parts of a fowl, you begin by turning the skin over the wings, and cutting the tendons of each of the joints; and then, by taking hold of the part commonly called the drumstick with your left hand, and the skin being already turned, you can easily get at the joint, by making it come out, to cut the tendons of each leg. On turning the separator with the points upwards, you give a cut at the breast-bone; and by holding the instrument with both hands, immediately after turning the points downwards, you also give a cut at the back-bone; and then, the four tendons being cut, the limbs are brought back to their former position. Then you introduce the instrument into the body at the other end of the bird, and with your left hand you take hold of the thigh-bone, which you also divide; and again turning the point downwards, you give another cut at the back-bone. With little practice, the cuts at the breast and back-bone are made without interfering in the least with the skin. Then you truss the bird in the common way; but a packing-needle and thread are to be preferred. When roasted, the appearance of the poultry is vastly improved by this simple operation. It looks more plump, on account of the sinews having lost their power of contraction whilst roasting: therefore, when the bird comes to table, the carver has merely to pass the knife in the usual manner to take up the wings and legs, and finds no resistance; the same at the breast and back, where it may easily be seen, whilst carving, that it has already been prepared.

Three minutes is about the time taken, by this new process, to cut into ten parts an ordinary fowl.

For a turkey or a goose the sinews are divided as above; and in the act of carving, instead of cutting the fillets in a straight line with the breast-bone, you separate them obliquely, and all other parts as usual.

Pheasants, ducks, and all wild fowl especially, must be prepared in a similar manner.

A hare or rabbit may also have the sinews and back-bone divided: to effect this, you lay the hare upon its back and give six cuts nearly through the back-bone, holding the separator with both hands, through the belly part; then you truss it for roasting. If it should happen to be a very large hare, the fillets only are carved, and they ought to be cut in thin slices in an oblique direction, instead of straight along the back.

Respecting the carving of any description of joints, it may be more easily explained. For a saddle of mutton or lamb, proceed as follows:—Commence by passing your knife down the back, where nothing but the meat and skin holds it together, and from thence crosswise to the flap, serving a cutlet and a slice between to each person, continuing the same way through the saddle. You will thus carve the meat according to the grain, and produce fresh hot gravy for each person as you proceed carving. Should any remain, it is fit either to be sent cold to table, or dressed otherwise advantageously.

The saddle-back of mutton I prefer, is composed of the two loins and two necks, trimmed into the form of a double saddle, without interfering in the least with the legs and shoulders, which would cause a serious loss to the butcher.

A round of beef, when upon the table, must be carved with a regular round of beef knife (very sharp), in slices not exceeding the thickness of a crown piece, assisting each guest to a slice: also, give one-third fat, with a little of the carrot and turnip; but never dig the under-done part from the centre to oblige any one, for they that cannot eat from a joint well cooked and fairly carved, are not worthy of having one set before them. Some persons like them, when salted, to cut red quite through. I do not admire it; but it is done by adding two ounces of sal prunella and half a pound of saltpetre to every fifteen pounds of salt used in pickling. When a round of beef is very large, some persons place a tin tube in the centre to boil it. I do not think it a bad plan, as it causes it to cook more regularly.

Amongst the number of joints, boiled to serve cold at the large civic, agricultural or benevolent anniversary dinners, the round of beef is the most prominent, and commonly left standing in dishes to get cold, which are soon filled with the gravy that runs from it, particularly if a little over-done. To remedy this, the following expedient will prevent the meat losing so much of its succulence:—Fill two large tubs with cold water, into which throw a few pounds of rough ice; and when the round is done, throw it, cloth and all, into one of the tubs of ice water; let it remain one minute, when take out and put it into the other tub: fill the first tub again with water, and continue the above process for about twenty minutes; then set it upon a dish, leaving the cloth on until the next day, or until quite cold. When opened, the fat will be as white as possible, besides having saved the whole of the gravy. If no ice, spring water will answer the same purpose, but will require to be more frequently changed. The same mode would be equally successful with the aitchbone.

For the ribs or sirloin of beef, pass the knife between the chine-bone and the flesh, to about an inch in depth, but only to about the length you think sufficient to cut as many slices from as you may require: then, having a sharp knife, cut off the outside slice very thinly; hold your knife a little in a slanting direction, and continue cutting thin slices from the chine to the ends of the sirloin in the dish as you carve. If a slice from the fillet is required, turn it over with a couple of forks; carefully part some of the fat which covers it, if too much: then cut short slices in a slanting direction, as if from the breast of a fowl, instead of cross-wise; for then, if clumsily carved and over-done, it has a strong resemblance to an old strap.

For a rump of beef, either roasted or stewed, always commence at the fattest end, carving in a slanting direction: by which means you will obtain a correct quantity of that delicate article, if even you should be carving for twenty people; whilst, by cutting straight across, some would have the greater proportion fat, and the remainder nothing but lean. Any other piece of beef rolled and stewed, and fillets of beef, as served for a remove, all require to be carved in a slanting direction.

For a fillet of veal, proceed in the same manner as directed for a round of beef.

A loin of veal, if cut straight at the commencement, is entirely spoiled; but when carved slantingly from the best end, and eaten with its own gravy, nothing could be nicer; the remainder is then also very good cold. Even the kidney ought to be served the same; and the breast, either roasted or stewed, requires the same style of carving.

For legs of mutton or lamb, I also proceed in a new way. The frill, which is placed upon the knuckle-bone, is not only intended to ornament the leg, but likewise to enable you to hold the bone with your left hand, and carving with the right, which would wonderfully facilitate the operation. Instead of cutting across the middle, which opens all parts at once, thus losing a great deal of the succulence, I commence carving at about two inches from the knuckle, beginning with the heel of the knife, drawing it along to the point, cutting six or eight slices at once, more or less if required: then pass the knife beneath the whole, detaching them from the bone, thus helping each person quickly, and with very hot meat. The gravy remaining in the meat will keep it moistened, in good order for cold; whilst, in the general manner, you have nothing but dry meat, or if under-done, on purpose for cold, the meat will always have a black appearance. This is my way of carving at home; but if objectionable to take the frill with the fingers, make use of the carving-fork. At home I never allow any gravy to be put into the dish, but served separately, in a boat; and if the meat is of good quality, and well roasted, it will supply an abundance of good gravy. If for the table of the wealthy, commence carving the leg nearer to the centre, but always in a slanting direction.

For shoulders of mutton or lamb to eat well and delicate, the fat and lean must be well mixed in serving; to accomplish which, the joint must be carved in a still more slanting direction than the legs, also beginning rather nearer to the knuckle.

For the necks and loins of mutton, never separate the bones of either with a chopper, or you will partially mutilate the meat, thus losing all the gravy in roasting, and frequently have great difficulty in carving; but separate the joints with a small saw, as neatly as possible, cutting in the direction you require to carve.

For ribs of lamb, which should be properly prepared for carving before being roasted, having the centre of the bones broken, with the chine-bone detached, to carve, you must, of course, follow the bones, which run rather slantingly, helping each person to a cutlet from the neck, with a slice from the breast, but not cut too thick. By following this plan, each person will have partaken of the breast, which, without contradiction, is the most delicate part (but which is most frequently left to be eaten when dry and cold); and if any remain, being evenly carved, it will be very presentable at table the next day.

To carve a ham, proceed as directed for the carving of a leg of mutton, commencing two inches from the knuckle, cutting very thin and delicate slices, slanting more and more as you proceed, or you will have nothing but fat left at the extremity.

To carve an ox tongue, stick your fork into the root, and cut a thin slice off, placing the heel of the knife upon it, which draw along to the point, thus taking the slice off in one cut, leaving it upon the dish, and serving the inner slices, cut in the same manner, but very thin and delicate; you will thus have carved the best part of it easily, without disfiguring the whole, still having a decent piece remaining to send up cold; but if you had commenced in the middle, you would at once spoil the appearance, and the remainder would eat dry when cold.

Nothing is more creditable to a carver, than leaving a piece of either meat, game, or poultry fit to re-appear at table in an inviting state.

HAUNCH OF VENISON.

How to serve eighteen or twenty persons:—Take off the flat bone, previous to roasting, at the back of the loin, and pass the knife from the knuckle all along the lower part of the flap, which is left about two inches wide; then begin to cut in a slanting direction from the beginning of the loin, through the leg as far as the knuckle, without reserving a well for the gravy, and, in fact, it is better, as every slice you cut through the leg produces its own gravy, boiling hot, which unavoidably gets cold in the well formed the other way of carving. Do not omit to save some fat for the next day, as your hash or pie would be insipid without.

Haunch of mutton or lamb may be carved either way.

For necks of venison, pass your knife across the lower part of the ribs, about four inches below the thickest part: then cut slices in a slanting direction, not interfering with the bone, as previously explained for shoulders of mutton.

Never let your guests sit down to table without acquainting them beforehand with the bill of fare, that is, if the dinner be a ceremonious one, because the great variation placed on the table is to give a choice to the different taste of the company. By selecting a few favourite dishes, digestion is rendered more easy, being then aided by the fancy of each individual: but should you be helped of a dish which does not meet with your approval, though, at the same time, you feel yourself constrained by politeness to eat of it, your dinner is spoiled, and you do no justice to the bountiful supply of your Amphytrion.

In domestic cookery, it is necessary to know, that however humble the means

of the individual may be, the food should be varied daily, if possible. Never dine two days on the same joint, without dressing it each day in a different manner. A plain joint, hot one day, may be served cold the next, particularly in summer—it is then excusable; but, by all means, the third day make a hash, as follows:—

HASH MUTTON.—Cut about a pound and a half of meat into thin slices, using a small quantity of fat; lay them upon a dish, sprinkle a spoonful of flour, a teaspoonful of salt, and a quarter ditto of pepper; place the meat in a stewpan, moisten with half a pint of water, or light broth if handy: add a little colouring to give it a nice brown colour. Place it upon the fire, allowing it to warm gently, stirring occasionally, simmering a quarter of an hour. Taste if more seasoning be required; if so, add a little, and serve very hot immediately. In making hash of any description, avoid having the keeping of it hot, or it would become greasy; and likewise prevent the hash boiling over the fire, which would cause the meat to eat hard and tough. To vary any description of hash, it may be served upon a large piece of buttered toast, or half a spoonful of chopped onions may be added with the flour and seasoning. Chopped parsley may also be added, with a spoonful of catsup, two of Harvey sauce, two of vinegar, or one of Chili vinegar: four nice green gherkins, in slices, may also be added at the time of serving. Some fresh mushrooms from the fields, cleaned, and stewed in the hash, is also a great improvement. A bay leaf also added imparts a pleasant flavour.

TO MAKE COFFEE ECONOMICALLY.

Buy your coffee not over-burnt; grind it at home, if possible; have a middle-sized filter, which holds a little more than a quart; pour about a pint of boiling water into the filter to heat it through, then empty it, and put a quarter of a pound of ground coffee on the filter; then put on the presser, and lastly the grating; then pour about half a pint of quite boiling water over it, put the cover on, and let it drain through. After three or four minutes, pour, by degrees, a pint and a half more boiling water, and, when well passed through, pour it from the filter into a very clean stewpan; set it on the corner of the fire; and, when a little white scum rises to the surface (not letting it boil), pour it a second time over the filter, and, when passed through, pour either into a silver *cafetière* or the cups. Serve boiling milk or cream in two small jugs; and white, or brown, or candied sugar. As soon as the coffee is poured from the coffee-pot, I put another quart of boiling water over it. This saves one ounce of coffee, by boiling it instead of water, and pouring it over as before.

TO MAKE A COLOURING OR BROWNING FROM SUGAR.

Put two ounces of white powdered sugar into a middling-sized stewpan, which place over a slow fire; when beginning to melt, stir round with a wooden spoon until getting quite black; when set it in a moderate oven, upon a trivet, for about twenty minutes; pour a pint of cold water over, let dissolve, place in a bottle, and use when required.

Never put salt, mustard, or any kind of sauces on your plate, without having previously tasted your food. It is not only a great breach of politeness towards your host, but an insult to the culinary artist; because that which is placed on the table as a made dish, is supposed to be seasoned to perfection. But, as very often this is not the case, then, after you have tasted it, you are at liberty to suit your own palate, which part of the human frame is as varied as the physiognomy.

When you help at table never give more than two or three slices of meat, cut thin. Carve everything in a slanting direction. A good carver ought never to ask if any person likes their meat well done or underdone, as you disfigure the joint at once: such fancies cannot be tolerated, except at the tables of the wealthy; for the million, it is a waste of £70 a year, when only seven or eight in family.

Have your vegetables, no matter how plainly dressed, always well done; the crudity of such aliments is unwholesome, and apt to destroy the coating of the stomach, that being the most delicate part of the digestive organs. Be also contented with one sort of vegetable on your plate at a time, potatoes excepted.

The greatest compliment a guest can pay to his host, is to ask to be served a second time of the same dish, though not above half the quantity first served should be given.

If by chance you should spill any sauce or gravy in carving, do not apologise; it is only calling the attention of the company to your awkwardness, which, without remark, might pass unnoticed.

Never cut up a fowl, or any kind of bird, at once, without knowing how many persons are going to partake of it: the proper manner is to ask each person, and then to help them separately.

Never remove any dish which has been placed on the table by a servant, however awkwardly it may be set. It is not your business to serve at your own table; rather let your servant look awkward than yourself, by his placing it over and over again before it is right.

Never press any one to take more food or wine than they appear to wish; it annoys your guests, and, whilst you make yourself too cheap, you also make it too common.

Never put more than one wine-glass before each guest at the commencement of dinner; have the others ready, and place them as required. It saves confusion; and often relieves a person from great distress, who, by chance, may not be acquainted with the different glasses which each sort of wine requires.

ON THE MANAGEMENT OF WARD'S CASES FOR THE GROWTH OF FERNS, &c.

IT is often asked, what are the best species of Fern, &c., to form a lasting, graceful, and effective group for those elegant little cases now so frequently seen in the windows of most houses? To this we reply, that the following arrangements will produce all that can be desired:—For the centre, a *Chamærops humilis*, the dwarf palm of the South of Europe; covering the ground at the base of its stem are the delicate and beautiful little ferns, *Hymenophyllum Tunbrigense* and *H. Wilsoni*; while *Adiantum capillus-veneris*, *A. formosum*, *Asplenium marinum*, *Pteris longifolia*, *Scolopendrium vulgare*, *Aneimia fraxinifolia*, *Cassebeeria hastata*, and the beautiful *Trichomanes speciosa* are other forms of ferns whose variously-shaped fronds contrast well with one another. Under the shadow of the ferns, several *Jungermanniæ* grow luxuriantly; and the *Oxalis acetosella* thrives wonderfully in the company of its cryptogamic neighbours, while *Lycopodium denticulatum* and *L. stoloniferum* surround the whole with a perennial hedge of verdure. Besides these, *Maxillaria rufescens*, an epiphytical orchid, has attached itself to the rough bark of a piece of suspended elder branch; and, in order that no space may remain unemployed, the husk of a cocoa-nut has been filled with earth, and hung in the dome at the top, and from this may be seen descending the graceful fronds of various pendulous ferns and lycopodiums.

When the case is small and close, a single watering at the time of setting the plants will generally be sufficient for nine or twelve months, or even longer. When the case is large, however, a freer application of water will be necessary.

GENERAL POSTAL REGULATIONS, &c.

RATES OF POSTAGE.—All letters from one part of Great Britain to another (including the Local Penny Posts and the London Twopenny Post) are charged, if prepaid, and not

Exceeding half an ounce .. .. 1d.
Exceeding half an ounce, and not exceeding one ounce .. 2d.

and so on, at the rate of 2d. for every additional ounce or fraction of an ounce. Unpaid and unstamped letters are charged double postage on delivery.

HOURS OF POSTING FOR THE EVENING MAILS.—The Receiving-Houses close at 5 30 P.M.; but letters are received for the evening's dispatch until 6 P.M., if an extra penny stamp is affixed. The Branch Post-offices at Charing Cross, Old Cavendish-street, and 108, Blackman-street, Southwark, receive letters until 6 P.M., and until ½ to 7 P.M. by affixing an additional penny stamp. At the Branch Post-Office in Lombard-street, the box remains open without additional fee until 6 P.M., and until 7 P.M. by affixing a penny stamp. At the General Post-Office in St. Martin's-le-Grand until 6, free; and until 7, by payment of the extra charge as at Lombard-street. From 7 to half-past 7 P.M., letters may be posted at the General Post-office upon payment of a fee of sixpence each, which must, as well as the postage, be pre-paid. Letters intended to pass by outward mails to foreign parts must be posted at the above hours.—N.B. Newspapers for the evening mails must be put into the Receiving-Houses before 5 P.M., the Branch offices before 5 30, or General Post Office before 6 P.M. From 6 P.M. to 7 30, on payment of one-halfpenny late fee; except newspapers for foreign parts, which must be posted at the General Post-Office and Branch Offices before 6 P.M., and at the Receiving-Houses before 5 P.M.

MORNING MAILS are forwarded to most of the principal towns in England and Wales, and to all parts of Ireland and Scotland, for which the letter-boxes at the Receiving-Houses will be open till 7 A.M. for newspapers, and ½ to 8 A.M. for letters; and at the Branch Offices, Charing-cross, Old Cavendish-street, and the Borough, for newspapers until half-past 7 A.M., and for letters until 8 A.M. At the General Post-Office and the Branch Office in Lombard-street, the boxes will close for newspapers at a quarter before 8 A.M., and for letters at half-past 8 A.M.

Any SINGLE BOOK or PAMPHLET can now be sent through the Post-Office to any part of the United Kingdom if not exceeding 16 oz. in weight, and open at both ends, by affixing six postage stamps; if above 16 oz. 1s., and 6d. for every additional pound or fraction of a pound. The Postmaster-General does not guarantee the delivery of books and pamphlets with the same accuracy and regularity as newspapers and letters, but in no case will the delivery be delayed more than 24 hours after the usual post.

BRITISH AND COLONIAL PAPERS between British Colonies, without passing through the United Kingdom, to be free; except that 1d. may be allowed as a gratuity to the master of the vessel conveying them.

NEWSPAPERS, BRITISH, FOREIGN, OR COLONIAL, passing between British or Colonial and Foreign Ports, and through the British post, to pay 2d.; if not through the British post, 1d.

NEW POSTAGE STAMPS intended principally for the pre-payment of foreign letters have been issued. They are of the value of one shilling each, the colour being green, and the form octagonal, to distinguish them easily from the smaller denomination of postage stamps at present in use. These stamps may be used for inland as well as foreign postage, but they are chiefly intended for the postage of letters to the United States, India, China, the West Indies, New South Wales, New Zealand, and other places to which the postage is one shilling.

PACKAGES which in length, breadth, or width exceed twenty-four inches, cannot be forwarded by post between any places within the United Kingdom; except, however, petitions or addresses to her Majesty, or petitions to either House of Parliament forwarded to any Member of either House, or printed votes or proceedings of Parliament, or letters to or from any Government offices or departments.

MONEY ORDERS.—With a view to simplicity and economy in the accounts of the Money Order Office, it has been found necessary to lay down the following rules:—1. Every money order issued on or after the 6th October, 1848, must be presented for payment before the end of the second calendar month after that in which it was issued (for instance, if issued in October, it must be presented for payment before the end of December), otherwise a new order will be necessary, for which a second commission must be paid. 2. As already notified to the public, if an order be not presented for payment before the end of the twelfth calendar month after that in which it was issued (for instance, if issued in October and not presented before the end of the next October), the money will not be paid at all. 3. As, after once paying a money order, by whomsoever presented, the office will not be liable to any further claim, the public are strictly cautioned *a*. To take all means to prevent the loss of the money order. *b*. Never to send a money order in the same letter with the information required on payment thereof. *c*. To be careful, on taking out a money order, to state correctly the Christian name as well as the surname of the person in whose favour it is to be drawn. *d*. To see that the name, address, and occupation of the person taking out the money order are correctly known to the person in whose favour it is drawn. 4. Neglect of these instructions will lead to delay and trouble in obtaining payment, and even risk the loss of the money. These instructions, together with some others of minor importance, will be found printed on every money order.

THE LAW OF BANKRUPTCY.

The new Act of Parliament to empower the Commissioners of the Court of Bankruptcy to order the release of bankrupts from prison in certain cases, which took effect on the 31st of August, 1848, has just been printed (11 and 12 Victoria, cap. 86). By this act it is provided that where any person has been adjudged bankrupt, and has surrendered to the fiat, and has obtained his protection from arrest, pursuant to the practice in bankruptcy, if such person shall be in prison at the time of obtaining such protection, any Commissioner acting under such fiat may order his immediate release from prison, either absolutely, or upon such condition as such Commissioner shall think fit, which release is not to affect the rights of creditors detaining him in prison. The second clause is an important one:—"And be it enacted that if any bankrupt whose last examination shall have been adjourned *sine die*, or whose certificate shall have been suspended or refused, shall be in execution, or be taken in execution, under a *capias ad satisfaciendum* at the suit of any creditor who might have proved under the fiat and detained in prison, any Commissioner acting under his fiat may order his release, after he shall have undergone such term of imprisonment, not exceeding two years, as to such commissioner may seem a sufficient punishment for such offence as he may appear to such Commissioner to have been guilty of."

THE QUEEN AND ROYAL FAMILY.

THE QUEEN.—VICTORIA, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, was born May 24th, 1819; succeeded to the throne, June 20th, 1837, on the death of her uncle, King William IV.; crowned, June 28th, 1838, and married, February 10th, 1840, to his Royal Highness Prince Albert. Her Majesty is the only daughter of his late Royal Highness Edward Duke of Kent, son of King George III.

His Royal Highness Francis Albert Augustus Charles Emanuel Busiel, DUKE OF SAXE, PRINCE OF COBURG AND GOTHA, K.G., Consort of her Majesty, born August 26th, 1819.

Her Royal Highness Victoria Adelaide Mary Louisa, PRINCESS ROYAL, born November 21st, 1840.

His Royal Highness Albert Edward, PRINCE OF WALES, born November 9th, 1841.

Her Royal Highness Alice Maud, born April 25th, 1843.

His Royal Highness Alfred Ernest Albert, born August 6th, 1844.

Her Royal Highness Princess Helena Augusta Victoria, born May 25, 1846.

Her Royal Highness Princess Louisa Carolina Alberta, born March 18, 1848.

THE QUEEN DOWAGER.—Amelia Adelaide Louisa Theresa, sister to the reigning Duke of Saxe Meiningen, born August 13th, 1792; married July 11th, 1818; crowned September 8th, 1831.

PRINCES AND PRINCESSES.

Ernest Augustus, DUKE OF CUMBERLAND, in Great Britain, and KING OF HANOVER, uncle to her Majesty, born June 5th, 1771, married, August 29th, 1815. Issue, George Frederick.

Adolphus Frederick, DUKE OF CAMBRIDGE, uncle to her Majesty, born February 24th, 1774; married, May 2nd, 1818, her Serene Highness Augusta Wilhelmina Louisa, youngest daughter of Frederick, Landgrave of Hesse. Issue, three children.

MARY, Aunt to her Majesty, born April 25th, 1776; married, July 22nd, 1816, her cousin, the Duke of Gloucester, deceased.

Victoria Mary Louisa, DUCHESS OF KENT, born August 17th, 1786; married, in 1818, the Duke of Kent (who died January 23rd, 1820); her Majesty's mother.

Augusta Wilhelmina Louisa, DUCHESS OF CAMBRIDGE, niece of the Landgrave of Hesse, born July 25th, 1795; married, in 1818, the Duke of Cambridge, by whom she has issue, George William, Augusta Caroline, and Mary Adelaide.

George Frederick Alexander Charles Ernest Augustus, K.G., only child of the King of Hanover, Prince Royal of Hanover, cousin to her Majesty; born May 27th, 1819; married, February, 1843, Princess Mary of Saxe Altenberg, and has a son.

George Frederick William Charles, K.G., son of the Duke of Cambridge, cousin to her Majesty, born March 26th, 1819.

Augusta Caroline Charlotte Elizabeth Mary Sophia Louisa, daughter of the Duke of Cambridge, and cousin to her Majesty, born July 19th, 1822; married, June 28th, 1843, Frederick, Hereditary Grand Duke of Mecklenburg Strelitz.

Mary Adelaide Wilhelmina Elizabeth, daughter of the Duke of Cambridge, and cousin to her Majesty, born November 27th, 1833.

THE QUEEN'S HOUSEHOLD.

Lord Great Chamberlain	Lord Willoughby D'Eresby
Lord Steward	Earl Fortescue
Lord Chamberlain	Marquis of Breadalbane, K.T.
Vice-Chamberlain	Lord E. Howard
Master of the Horse	The Duke of Norfolk
Clerk Marshal and Chief Equerry	Lord Alfred Paget
Treasurer of the Household	Lord Marcus Hill
Comptroller of the Household	Lord R. Grosvenor
Lord High Almoner	Archbishop of York
Sub-Almoner	Rev. E. Goodenough, D.D.
Clerk of the Closet	Bishop of Norwich
Master of the Buckhounds	Earl Granville
Comptroller of Accounts	Sir William Martins
Master of the Household	Major-General Bowles
Captain of the Yeomen of the Guard	Viscount Falkland
Captain of Gentlemen-at-Arms	Lord Foley
Lords in Waiting	Earl of Listowel, Lord Camoys, Lord Waterpark, Earl Ducie, Earl of Morley, Lord Byron, Earl of Morton, Marquis of Ormonde
Mistress of the Robes	The Duchess of Sutherland
Ladies of the Bedchamber	Countess of Mount Edgcumbe, Marchioness of Douro, Countess of Disart, Countess of Gainsboro', Countess of Charlemont, Viscountess Jocelyn, Viscountess Canning, Lady Portman.
Physicians	Charles Locock, Esq., M.D., Sir James Clark, Bart, and W. F. Chambers, Esq., M.D.
Surgeons	Sir B Brodie, Bart., and R. Keate, Esq.

HER MAJESTY'S MINISTERS.

OF THE CABINET.

First Lord of the Treasury (Premier)	Lord John Russell
Lord Chancellor	Lord Cottenham
Lord President of the Council	The Marquis of Lansdowne
Lord Privy Seal	The Earl of Minto
Secretaries of State — Home	Sir George Grey, Bart.
Secretaries of State — Foreign	Lord Palmerston
Secretaries of State — Colonial	Earl Grey
Chancellor of the Exchequer	The Rt. Hon. Charles Wood
President of the Board of Control	Sir J. C. Hobhouse
President of the Board of Trade	Rt. Hon. H. Labouchere
First Lord of the Admiralty	The Earl of Auckland
Paymaster-General	Earl Granville
Chancellor of the Duchy of Lancaster	Lord Campbell
Chief Commissioner Woods and Forests	Earl of Carlisle
Postmaster-General	The Marquis of Clanricarde

IRELAND.

Lord Lieutenant	The Earl of Clarendon
Lord Chancellor	The Right Hon. M. Brady
Attorney-General	Richard Moore, Esq.
Solicitor-General	James H. Monaghan, Esq.

SCOTLAND.

Lord High Constable	The Earl of Errol
Lord Privy Seal	Viscount Melville
Lord Advocate	Right Hon. A. Rutherfurd

GOVERNMENT OFFICES AND OFFICERS.

TREASURY,
WHITEHALL.

LORDS COMMISSIONERS.

Lord J. Russell, Sir Chas. Wood, Bart. H. Rich, Esq., R. M. Bellew, Esq., W. G. Craig, Esq.
Secretaries, J. Parker, Esq., H. Tufnel, Esq.
Assistant Secretary, Sir C E. Trevelyan.
Principal Clerk, S. R. Leake, Esq.
Solicitor, G. Maule, Esq.

EXCHEQUER,
WHITEHALL-YARD.

Chancellor, the Right Hon. Charles Wood, Bart.
Comptroller, Lord Monteagle
Assistant, A. Eden, Esq.
Chief Clerk, F. T. Ottey, Esq.
Accountant, G. S. Frederick, Esq.

HOME OFFICE,
WHITEHALL.

Secretary of State, Sir George Grey.
Under-Secretaries, G. C. Lewis, Esq., H. Waddington, Esq.
Chief Clerk, T. H. Plasket, Esq.
Private Secretary, H. Brand, Esq.

FOREIGN OFFICE,
DOWNING-STREET.

Secretary of State, Lord Palmerston
Under-Secretaries Lord Eddisbury, H. U. Addington, Esq.
Chief Clerk, G. L. Conyngham, Esq.
Private Secretary, the Hon. Speucer Ponsonby

COLONIAL OFFICE,
DOWNING-STREET.

Secretary of State, Earl Grey
Under-Secretaries, B. Hawes, Esq., H. Merivale, Esq.
Assistant Secretary, T. F. Elliot, Esq.
Chief Clerk, Peter Smith, Esq.
Private Secretary, the Hon. Capt. Grey.

IRISH OFFICE,
18, GREAT QUEEN-STREET, WESTMINSTER.

Chief Secretary, the Right Hon. Sir W. M. Somerville, Bart.
Chief Clerk, George Trundle, Esq.
Assistant, Hon. S. D. Montague
Private Secretary, H. Meredyth, Esq.
Counsel, E. Batty, Esq.

BOARD OF TRADE,
WHITEHALL.

President, the Rt. Hon. H. Labouchere
Vice-President, Earl Granville. The Archbishop of Canterbury, the Cabinet Ministers, and the Right Hon. C. Arbuthnot.
Secretaries, G. R. Porter, Esq., Sir Denis Le Marchant, Bart.
Secretaries Assistants, F. Lock, Esq., H. Hobart, Esq.
Private Secretary to the President, T. Baring, Esq.
Assistant Legal Secretary, Stafford H. Northcote, Esq.

BOARD OF CONTROL,
CANNON-ROW, WESTMINSTER.

President, Sir John Cam Hobhouse, and the Cabinet Ministers
Secretaries, James Wilson, Esq., M.P., T. Wyse, Esq.
Private Secretary, T. B. Hobhouse, Esq.
Solicitor, R. Groom, Esq.

POOR-LAW BOARD,
1 AND 2, SOMERSET-PLACE.

Commissioners, Charles Buller, Jun., Esq., M.P., President, the Lord President of the Council, the Lord Privy Seal, the Secretary of State for the Home Department, the Chancellor of the Exchequer.
Secretaries, George Nicholls, Esq., C.B., Lord Ebrington, M.P.
Assistant Secretaries, William Golden Lumley, Esq., Barrister-at-Law, and H. Fleming, Esq.
Inspectors, Edward Gulson, Esq., W. H. Toovey Hawley, Esq., Richard Hall, Esq., Barrister-at-Law, Robert Weale, Esq., Sir J. James Walsham, Bart., Alfred Austin, Esq., Barrister-at-Law, G. G. Wandisford Pigott, Esq., J. T. Graves, Esq., Barrister-at-Law, Andrew Doyle, Esq., Barrister-at-Law, J. Manwaring, Esq., H. Burrard Farnall, Esq.
Private Secretary to the President, Geo. Buller, Esq.
First Clerk, Mr. Francis Fletcher.
Board Clerk and Accountant, Mr. Hugh Owen.

ADMIRALTY,
WHITEHALL.

Lords Commissioners, The Earl of Auckland, Admiral Dundas, Capt. A. Milner, Captain the Hon. F. Berkeley Captain Lord John Hay, the Hon. Wm. Cowper
Secretaries, H. G Ward, Esq., Capt. W. A. B. Hamilton, R.N.
Private Secretary, Capt. H. Eden
Chief Clerk, H. F. Amedroz, Esq.
Hydrographer, Admiral F. Beaufort
Assistant, M. Walker, Esq.
Civil Architect, Colonel Irving.

CIVIL DEPARTMENT, SOMERSET HOUSE.

Inspector-General, Sir W. Burnet
Director-General of Works, Col. Irvine
Storekeeper, Hon. R. Dundas
Comptroller of Steam Department, Capt. A. Ellis.
Chief Clerks, T. Cullings, W. Leyburn, B. Fosset, Wm. Scamp, Esqs.
Accountant, J. T. Briggs, Esq.
Deputy Accountant, O'Bryan Woolsey, Esq.
Victualling, J. Meek, Esq.

ROYAL OBSERVATORY,
GREENWICH.

Astronomer Royal, G. B. Airy, Esq., M.A.
Assistants. Rev. R. Main, M.A., John Henry, Esq., William Ellis, Esq., Edwin Dunkin, Esq.

MAGNETICAL AND METEOROLOGICAL DEPARTMENT.

Superintendent, James Glaisher, Esq.
Assistants, Thomas Downs, George Humphreys, and John Charles Henderson, Esqs.

ROYAL HOSPITAL FOR SEAMEN,
GREENWICH.

Governor, Vice-Admiral Sir Charles Adam, K.C.B.
Lieutenant-Governor, Rear-Admiral Sir James Alexander Gordon, C.B.
Captains, J. Simpson, Thos. Dickenson, G. Moubray, A. B. Branch, K.R.H.G.
Commanders, C. Robinson, W. C. C. Dalyell, J. Corbyn, E. W. Garrett.
Lieutenants, F. Bedford, W. Rivers, M. Fitton, J. W. Rouse, D. O'Brien Casey, B. J. Lovelcss, J. Dornford, C. M'Kenzie
Chaplains, Rev. J. K. Goldney, Rev. E. Kitson
Medical Inspector of Hospitals, Sir John Liddell, M.D.
Deputy Medical inspector of Hospitals, Alexander Nisbet, M.D.
Surgeon, James M'Ternan

CIVIL DEPARTMENT.

Commissioners, Hon. W. B. Baring (Paymaster of the Navy), the Earl of Lincoln, Sir C. E. Douglas, M.P., Capt. Sir H. Hart, R.N., Sir W. O. Peli, R.N., George Tierney, Esq.
Secretary, J. A. Lethbridge, Esq.

ROYAL HOSPITAL SCHOOLS,
GREENWICH.

Superintendent, Lieut. John W. Rouse
Lieutenant, Bassett J. Loveless
Chaplain, Rev. Geo. Fisher, M.A., F.R.S.
Master of the Nautical School, Edward Riddle, F.R.A.S.

WAR OFFICE,
WHITEHALL.

Secretary at War, Rt. Hon. Fox Maule
Deputy, L. Sulivan, Esq.
Examiner, E. Marshall, Esq.
First Clerk, J. Borrow, Esq.
Senior Clerks, H. Milton, R. Kirby, J. Sandham, J. Crooms, F. Kimpton, W. Anderson, J. Hanby, Esqrs.
Private Secretary, — Carmichael, Esq.

PAYMASTER-GENERAL'S OFFICE,
WHITEHALL.

Paymaster-General, Earl Granville.
Assistant Paymaster-General, W. G. Anderson, Esq.
Chief Clerks, T. Morris, J. Perrior, and H. A. Harrison, Esqs.

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HORSE-GUARDS

Commander-In-Chief, Duke of Wellington
Private Secretary, A. Greville, Esq.
Military Secretary, Lieut.-General Lord F. Somerset
Aides-de-Camp, Col. Hon. G. Anson, Lieut.-Col. Marquis of Douro, Capt. Earl of Mareb, Captain Marquis of Worcester
Assistants to Military Secretary, F. H. Lindsay, Esq., F. Fergusson, Esq

ADJUTANT-GENERAL'S OFFICE,
HORSE-GUARDS.

Adjutant-General, Sir J. Macdonald
Deputy, Major-Gen. G. Brown

Assistant, Lieut. Col. Sullivan
Depnty, Major Roche Mead
First Clerk, R. Canon, Esq.

QUARTER-MASTER GENERAL'S OFFICE,
HORSE-GUARDS.

Quarter-Master General, General Sir J. W. Gordou
Assistant, Colonel J. Freeth
Deputy, Major Enoch
Confidential Clerk, J. O'Neil, Esq.
First Clerk, T. Marsh, Esq.

ADMIRALTY COURT,
2, PAUL'S BAKEHOUSE-COURT, DOCTORS'-COMMONS.

Judge, Rt. Hon. S. Lushington, D.CL.
Registrar, H. B. Swabey, Esq.
Queen's Advocate, Sir J. Dodson, LL.D
Admiralty Adv., J. Phillimore, D.CL.
Judge Advocate, H. J. Shepherd, Esq.
Queen's Proctor, F. H. Dyke, Esq.
Admiralty Proctor, W. Townsend, Esq
Marshal, John Deacon, Esq.
Solicitor, Wm. F. Robson. Esq.

JUDGE ADVOCATE-GENERAL'S OFFICE,
35, GREAT GEORGE-ST., WESTMINSTER.

Judge Advocate, W. G. Hayter, Esq.
Depnty, F. N. Rogers, Esq., Q C.
Clerks, J. Scollick, Esq., Mr. W H. Hughes, Mr. J. Scollick, Jun.

BOARD OF ORDNANCE,
86, PALL MALL.

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Surveyor-General, Col. C. R. Fox,
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Storekeeper, Sir Thomas Hastings.
Secretary to the Master-General, Lord C. Paget.
Secretary to the Board, R. Byham, Esq.
Aide-de-Camp, Capt. Patrick Paget.

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2, WHITEHALL-PLACE.

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Bushy Park, Queen Dowager.
Hyde Park, H.R.H. Duke of Cambridge.
St. James's Park, Duke of Cambridge.
Richmond Park, Duke of Cambridge.
Greenwich Park, the Earl of Aberdeen.
Hampton Court, Lady Bloomfield.
New Forest, Duke of Cambridge.
Whittlebury Forest, Duke of Grafton
Waltham Forest, Earl of Mornington.
Wychwood Forest, Lord Churchill.
Dean Forest. Earl of Carlisle.

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LITTLE TOWER-HILL.

Master Worker, R. L. Sheil, Esq.
Deputy, J. M. Morrison, Esq.
Comptroller, W. H. Barton, Esq.
Chief Engraver, Wm. Wyon, Esq.
Assistant, Leonard Wyon, Esq.
Chief Medallist, B. Pistrucci, Esq.
Assayer, H. Bingley, Esq.
Solicitor, John Blunt, Esq.

STATE PAPER OFFICE,
12, DUKE-STREET, WESTMINSTER.

Keeper, Right Hon. H. Hobhouse.
Deputy, C. Lechmere, Esq.
Chief Clerk, R. Lemon, Esq.
Junior Clerk, T. Temple, Esq.

PRIVY SEAL,
28, ABINGDON-STREET, WESTMINSTER.

Lord Privy Seal, Earl of Minto.
Private Secretary, Hon. C. J. B. Elliot.
Chief Clerk, J. G. Donne, Esq.
(By Patent) R. Eden. Esq.
Keeper of Records, R. Eden, Esq.
Clerk, W. Goodwin, Esq.

SIGNET OFFICE,
28, ABINGDON-STREET.

Keepers of the Signet, the Secretaries of State.
Chief Clerks, Rev. W. H. E. Bentinck, C. S. Grey, Esq.
Deputy T. H. Plasket, Esq.
Record Keepers, E. D. Jones, Esq., H. W. Sanders, Esq

TITHE COMMISSION,
9, SOMERSET PLACE.

W. Blamire, Esq., T. W. Buller, Esq., Rev. Richard Jones, M.A.

REGISTRAR OF DESIGNS OFFICE,
4, SOMERSET-PLACE.

Registrar, Clement Johnson, Esq.
Assistant Registrar, Hon. E. C. Curzon.
Chief Clerk, J. Hill Bowen, Esq.

COLONIAL LAND AND EMIGRATION COMMISSIONERS,
9 ANN 15, PARK-STREET, WESTMINSTER.

T. W. Clinton Murdoch, Esq., Charles Alex Wood, Esq , Fredk. Rogers, Esq.
Secretary, S. Walcott, Esq.

STAMP AND TAX OFFICE,
SOMERSET HOUSE.

Chairman, H. L. Wickham, Esq.
Deputy, J. Thornton, Esq.
Commissioners, C. P Rushworth, Esq., H. S. Montague, Esq., Alfred Montgomery, Esq.
Secretary, C. Pressly, Esq.
Assistant Secretary, T. Keogh, Esq.
Solicitor, Joseph Timm, Esq.
Assistant Solicitor, Hugh Tilsley, Esq.
Receiver-General, W. Everett, Esq.
Comptroller, J. Lightfoot, Esq.
Comptroller of Legacy Duties, C. Trevor, Esq.

CUSTOM HOUSE.

Chairman, Sir Thomas Fremantle.
Deputy, the Right Hon. G. R. Dawson.
Commissioners, H. Richmond, Esq., S. G. Lushington, Esq.,—T. P. Dickenson, Esq., F. Goulburn, Esq., C. C. Smith, Esq , Capt. Saurin, Hon. S. E. Spring Rice.
Secretary, C. Scovell, Esq.
Assistant, W. Maclean, Esq.
Receiver-General, Sir. F. Doyle.
Comptroller-General, W. Dickinson, Esq
Solicitor, J. G. Walford, Esq
Surgeon, J. O. McWilliam, Esq., M.D.

EXCISE OFFICE,
OLD BROAD-STREET.

Chairman, J. Wood, Esq.
Deputy, Hart Davis, Esq.

COMMISSIONERS.

T. Harrison, Esq., H. F. Stephenson, Esq., Hon. W. H. Percy, C. J. Herries, Esq., and Charles Ross, Esq.
Secretary, J. C. Freeling, Esq.
Assistant, G. Ballard, Esq.
Receiver-General, W. T. Thornton, Esq.
Comptroller and Auditor, V. Davies, Esq.
Solicitor, C. M. Carr, Esq.
Assistant Solicitor, J. Bateman, Esq., LL.D.

METROPOLIS ROADS,
22, WHITEHALL-PLACE.

Secretary, J. L. Panter, Esq.
Surveyor-General, Sir Jas. M'Adam.
Accountant, V. C. Wright, Esq.
Inspector, H. Browse, Esq.
Solicitor, J. W. Lyon, Esq.

OFFICE OF METROPOLITAN BUILDINGS,
6, ADELPHI-TERRACE.

Registrar, A. Symonds, Esq.
Official Referees, W. Hosking, Esq., A. Paynter, Esq., J. Shaw, Esq.
Examiners, Sir Robt. Smirke, J. Pennethorne, Esq., T. Cubitt, Esq.

GENERAL REGISTER OFFICE,
7 ANN 8, SOMERSET-PLACE, SOMERSET HOUSE.

Reg.-General, G. Graham, Esq.
Chief Clerk, Thomas Mann, Esq.
First Clerk of Records, E. Edwards, Esq.

RAILWAY BOARD,
BOARD OF TRADE, WHITEHALL.

Chief Commissioner, the Right Hon. H. Labouchere.
Commissioners, Earl Granville, Sir E. Ryan, Col. Aderson.
Secretary, Capt. H. D. Harness, R E.

BANK OF ENGLAND.

GOVERNOR—James Morris, Esq.—DEPUTY GOVERNOR—H. J. Prescott Esq.

DIRECTORS.

Thomas Baring, Esq.
Henry Wollaston Blake, Esq.
Edward Henry Chapman, Esq.
William Cotton, Esq.
John Oliver Hanson, Esq.
John Benjamin Heath, Esq.
Kirkman Daniel Hodgson, Esq.
Henry Lancelot Hollaud, Esq.
John Gellibrand Hubbard, Esq.
Thomas Newman Hunt, Esq,
Charles Frederick Huth, Esq.
Alfred Latham, Esq.
George Lyall, Junior, Esq.
Thomas Masterman, Esq.
Alexander Matheson, Esq.
Humphrey St. John Mildmay, Esq.
George Warde Norman, Esq.
John Horsley Palmer Esq.
James Pattison, Esq.
Sir John Henry Pelly, Bart.
Thomas Charles Smith, Esq.
William Thompson, Esq., Alderman
Thomas Matthias Weguelin, Esq.
Francis Wilson, Esq.

CITY OFFICERS.

LORD MAYOR.

Elected September 29th—Sworn in November 9th.
The Right Honourable Sir JAMES DUKE, M.P., Farriugdon Without, 1840.

SHERIFFS.

Elected 24th June—Sworn in 28th September.
Thomas Quested Finnis, Esq. | Jacob Emanuel Goodhart, Esq.

UNDER SHERIFFS.

Thos. France, Esq. | D. W. Wire, Esq.

ALDERMEN.

	When chosen Aldermen.
THE FOLLOWINO HAVE NOT PASSED THE CHAIR.	
Farncomb, Thomas, Esq., Bassishaw ; Griffin's Wharf, Southwark	1840
Musgrove, John, Esq., Broad-street ; 18, Old Broad-street	1842
Hunter, William, Esq., Coleman-street ; 10, Finsbury Circus	1843
Challis, Thomas, Esq., Cripplegate ; 32, Wilson-street, Finsbury	1843
Sidney, Thomas, Esq., M.P., Billingsgate ; 8, Ludgate-hill	1844
Moon, F. G Esq., Portsoken ; 20, Threadneedle-street	1844
Salomons, David, Esq., Cordwainer, 1, Shorter's-court	1848
Finnis, Thomas Quested, Esq , Tower, Tower-street	1848
Lawrence, William, Esq., Bread-street, 30, Bread-street	1848
THE FOLLOWINO HAVE PASSED THE CHAIR.	
Hunter, Sir. C. S. Bart., Bridge Without ; 23, Euston-square	1804
Thompson, W. Esq., M.P., Cheap ; Upper Thames-street	1821
Key, Sir John, Bart., Langbourn ; 3, Ahchurch Lane	1823
Laurie, Sir Peter, Knt., Aldersgate ; 7, Park-square, Regent's-park	1826
Farebrother, C., Esq., Lime-street ; 6, Lancaster-place, Strand	1826
Copeland, W. Esq., M.P., Bishopsgate ; 37, Lincoln's Inn-fields	1829
Kelly, T., Esq., Farringdon Within ; 17, Paternoster-row	1830
Wilson, Samuel, Esq., Castle Baynard ; 24, St. Paul's Chnrch-yard	1831
Marshall, Sir C. Knt., Bridge Within ; 43, Russell-square	1832
Pirie, Sir John, Bart., Cornhill ; Birchin Lane	1834
Humphery, J., Esq., M.P., Aldgate ; Hays's Wharf, Southwark,	1835
Magnay, Sir William, Bart., Vintry ; College-hill	1833
Gibbs, Michael, Esq., Walbrook ; 33, Walbrook	1838
Johnson, John, Esq., Dowgate ; Millbank	1839
Carroll, Sir George, Candlewick, 34, Cavendish-sqnare	1840
John K. Hooper, Esq., Queenhithe	1840

EAST INDIA COMPANY.

Six Directors are elected annually in April, when six go out by rotation. Each Director serves four years. The figure prefixed denotes the number of years each has to serve.

DIRECTORS.

(1) CHAIRMAN—Lieutenant-General Sir James Law Lushington, G.C.B., 26, Dorset Square.

(3) DEPUTY CHAIRMAN—Major-Gen. A. Galloway, K.C.B., Upper Harley-street.

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(2) John Loch, Esq.
(2) Charles Mills, Esq.
(3) John Masterman, Esq., M.P.
(1) John Petty Muspratt, Esq.
(2) Henry St. George Tucker, Esq.
(4) Henry Alexander, Esq.
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(2) Henry Shank, Esq.
(3) Russell Ellice, Esq,
(3) Sir Richard Jenkins, G.C.B.
(2) John Cotton, Esq.
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(4) John Shepherd, Esq.
(4) Francis Warden, Esq.
(1) Martin Tucker Smith, Esq., M.P.
(2) W. H. Chicheley Plowden, Esq., M.P.
(1) Elliot Macnaghten, Esq.
(4) Major James Oliphant, Esq.
(4) Hon. Wm. Henry Leslie Melville.
(3) Ross Donelly Mangles, Esq., M.P.
(4) Major-Gen. James Caulfield, C.B.

THE FOLLOWING GENTLEMEN ARE OUT BY ROTATION.

Sir Robert Campbell, Bart.
William Joseph Eastwick, Esq.
Sir James Weir Hogg, Bart., M.P.
Lieut.-Col. William Henry Sykes.
John Clarmont Whiteman, Esq.
Sir Henry Willock, K.L.S.

LAW COURTS.

CHANCERY.—Lord High Chancellor, Lord Cottenham. Master of the Rolls, Lord Langdale. Vice Chancellor, Sir L. Shadwell. First Vice Chancellor, Sir James L. K. Bruce ; Second ditto, Sir James Wigram.

QUEEN'S BENCH.—Lord Chief Justice, Lord Denman. Judges, Sir John Pattesou, Sir John T. Coleridge, Sir Wm. Wightman, Sir Wm. Erle.

COMMON PLEAS.—Lord Chief Justice, Sir Thos. Wilde. Judges, Sir Thos. Coltman, Sir Wm. Hen. Maule, Sir Cresswell Cresswell, Sir Edward Vaughan Williams.

EXCHEQUER.—Lord Chief Baron, Sir Frederick Pollock. Barons, Sir James Park, Sir Edw. H. Alderson, Sir Robert M. Rolfe, Sir Thomas J. Platt.

COURT OF BANKRUPTCY.

Birmingham, John Balguy, Q.C., Esq., and Robert Daniell, Esq.
Liverpool, Walter Skirrow, Esq., and — Perry, Esq.
Manchester, Ebenezer Ludlow, Esq., Sergeant, and Wm. Thos. Jemmett, Esq.
Leeds, Martin John West, Esq., and W. S. Ayrton, Esq.
Bristol, H. J. Stephen, Esq., Sergeant, and Richard Stevenson, Esq.
Exeter, Edward Goulburn, Esq., Sergeant
Newcastle, N. Ellison, Esq.

CONSULATE AND PASSPORT OFFICES.

AUSTRIA.—Embassy, 7, Chandos-stleet, Cavendish-square, between 12 and 2.

BELGIUM.—Legation, 9 A, Weymouth-street, Portland-place, between 11 and 3 ; delivered next day between 11 aud 2, gratis ; at the Consul's office, between 10 and 4—fee 5s.

BAVARIA.—The Minister, 3, Hill-street, Berkeley-sqnare, when personally known to him ; or at the Consul Office.

BRAZIL.—Legation, 10, York-place, Portman-square, between 12 and 2, gratis.

DENMARK.—6, Waruford-court, between 10 and 4—fee 10s. 6d.

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PRUSSIA.—106, Fenchurch-street, between 10 and 6—fee 7s.

RUSSIA.—9, Winchester-buildings, between 10 and 4 ; delivered following day—fee 6s. 4d.

THE ILLUSTRATED LONDON ALMANACK

LONDON

PUBLISHED AT THE OFFICE OF THE ILLUSTRATED LONDON NEWS,

198, STRAND.

INTRODUCTION.

THE FIRST ILLUSTRATED LONDON ALMANACK was published for the year 1845, and it has appeared annually since that time.

All those divisions of the Almanack for 1846, relating to the Calendar, to Astronomy, and to Science in general, were entrusted to JAMES GLAISHER, ESQ., F.R.S., F.R.A.S., of the Royal Observatory at Greenwich, and all relating to these subjects, since that time, have been under his superintendence.

The NOTES on the MONTH, on the fourth page of every Month, are by Mrs. LOUDON.

It is thought better to give additional information each year than to repeat Tables or Particulars which are the same for several years together; therefore, for explanations, &c., we refer to preceding Almanacks. In this Almanack, at page 52 will be found a very useful Table, shewing the time of the Sun's rising and setting, and the length of the day at all places in Great Britain and Ireland, for every 10th day of the year; and at page 54 will be found a clear description of the heavens, by which means the names of the Stars, &c. may very readily be learned. Both these tables will answer for several years.

ON THE METEOROLOGY OF ENGLAND.

THE geographical position of England being distant both from the Equator and the Pole, together with the circumstance of being an island situated with the great European continent on the east, open to extensive oceans on the south-west, the west, and the north, and under the influence of the great cold from the north—all operate to cause the weather to be more variable than in countries on the Continent. In England, in fact, the effects of distant phenomena are registered frequently; and without a well-combined system of uniform observations, extending over the surface of the globe, and deduction of their results, we cannot hope to trace the source of many recorded phenomena, and, in fact, of none except those only of a local nature.

The ever-varying state of the weather of Great Britain has led to much individual enquiry; but it has failed to receive that combination of labour and that support which is necessary even to the determining the source to which local disturbances may be traced, and the extent of local laws. Yet, when we consider its practical importance to the physician, to the agriculturist, to the navigator—in fact, to all classes of persons—it seems somewhat strange that Meteorology has met with this neglect.

On the state of the atmosphere, combined in various ways with local circumstances, epidemic complaints seem to depend; and it is highly probable that the present epidemic of cholera is mainly attributable to the peculiarities of the atmosphere which have lately been prevalent, combined with local circumstances. To render our Almanack the most generally useful, we have been anxious to collect the meteorological particulars to the present time, including those when a particular disease existed, as we know that many medical gentlemen, and others, are desirous to elucidate the connexion which may have existed between this disease and the weather.

The following meteorological particulars, derived from the published volumes of the Greenwich observations, and from the meteorological reports furnished by the Astronomer Royal to the Registrar-General, will not only be useful for this and other similar investigations, but will exhibit the full particulars of an English year:—

MEAN MONTHLY READING OF THE BAROMETER AT GREENWICH.

MONTHS.	YEARS.								
	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
	In.	In.	In.	In.	In.	In.	In.	In.	In.
January .	29 702	29 901	29.674	29.891	29.704	29 671	29.768	29 816	29.771
February .	29.697	29.876	29.473	29.498	29.840	29.849	29.782	29.517	30.106
March . .	29.784	29 747	29 758	29 710	29.795	29.655	29 882	29 505	29 915
April . .	29 731	29.914	29 687	30.000	29 696	29.589	29.653	29.589	29 517
May . . .	29.731	29.782	29.664	29.945	29.712	29.779	29.764	29 926	29 766
June . .	29.801	29 901	29 700	29 814	29 775	29 866	29.805	29 642	29 868
July . .	29 716	29.820	29.826	29.753	29 769	29 757	29 924	29 836	29 789
August .	29 768	29.869	29.819	29 677	29.729	29 777	29 876	29.732	29 841
September.	29 624	29.715	30 017	29 881	29 801	29.824	29 825	29 832	29.767
October .	29 436	29 849	29 604	29 562	29 847	29 516	29.803	29.646	*
November .	29.672	29 599	29.718	29.690	29.575	29.821	29 905	29.785	
December .	29 574	30.007	30.245	29 885	29.658	29.097	29 778	29.807	

These numbers show the exact length of the column of mercury which has been balanced by the atmosphere in every month. The length of this column depends almost wholly upon the amount of air and of water mixed with it in the invisible shape of vapour, and every variation in the volumes of air and water is shown by a corresponding variation in the reading of the barometer. We may briefly remark, that if the column of mercury in a barometer be weighed in pounds, such weight would represent the pressure of a column of atmosphere of the same dimensions reaching from the place of the barometer, to the top of the atmosphere.

If at any time there be a diminution of pressure at one place, there must be a corresponding increase at some other place; the less portion of the atmosphere is not annihilated: for instance, if at any place the decrease of the reading of the barometer be one inch, this implies that one-thirtieth of the whole atmosphere is removed from that place—there must either be an increase at some other place of one inch in the reading of the barometer, or that portion of the atmosphere must be spread over many places; hence one of the necessities of uniform and systematic observations taken simultaneously at many places.

MEAN MONTHLY TEMPERATURE OF THE AIR AT GREENWICH.

MONTHS.	YEARS.								
	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January . . .	33 6	32.9	39 9	39.1	38 3	43.7	35.1	34.6	40.1
February . .	35 3	40 8	36 0	35.2	32.7	43 9	35.4	43 4	43.2
March . . .	46.2	44 9	42 9	41 5	35.2	43 3	41.0	43 8	42 5
April	47 0	45 2	47.1	51.7	46 3	47 1	5 3	47.6	43.2
May	56.8	53.2	52.2	52 9	49 4	54.6	56.4	59.7	54.0
June	56.4	62 9	56.3	60.7	60.7	65.3	58.0	58.5	57.9
July	57 8	60.2	60.9	61.4	59.8	64.5	65.4	61.5	62 1
August . . .	60.5	65.4	62.1	57.7	57 3	63 2	62.1	58.5	62.9
September . .	58.1	56.4	59.5	56.9	53.6	60.1	54 3	55.8	58.8
October . . .	48.8	45.4	48.0	49.5	50.2	50.5	52 9	51 6	
November . .	42 7	42.8	43.8	44 0	45 8	46 0	46.9	43.8	
December . .	40.5	45.0	43.9	33 0	41.7	32.9	42.8	44.0	

* On reading these numbers, the figures to the right of the point show the parts of an inch; thus, 29.697 is to be read 29 inches, 6 tenths, 9 hundreds, and 7 thousandths of an inch.

MEAN DAILY RANGE OF TEMPERATURE OF THE AIR AT GREENWICH.

MONTHS.	YEARS.								
	1841.	1842.	1843	1844.	1845.	1846.	1847.	1848.	1849.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg	Deg.
January . .	11.1	6.4	7.9	8.7	6.4	7.7	8 8	8.3	10 9
February .	9.1	10.4	7 5	10.5	8.7	8.3	11.6	10.7	12.9
March . .	17.5	10.9	12.4	12 1	11.1	12.7	16.0	14.3	13.8
April . . .	16 5	16.1	15.4	21.0	16.8	13.1	18.3	16.7	16.0
May . . .	21.3	16 7	14.7	18.6	14.2	16.6	21.2	30·5	16.3
June . . .	18.8	22 2	15.2	19 9	18.2	22 5	19.4	17.7	20.6
July . . .	15 6	17.7	15 6	16 2	14.9	17.5	23 3	22.5	22.6
August . .	16.3	20 3	16.4	15.4	14 8	15 5	21 0	18.5	20.2
September .	16 0	12 8	17.4	15 3	15.6	18.0	18.7	20.9	17.5
October . .	11.7	13.2	12 8	12 4	13.3	10.4	14.0	16 5	
November .	10.7	7.9	10.2	7.4	10 9	8.0	11.4	15.7	
December .	9 4	8 2	6 6	5 4	9.9	10.3	9.7	12 7	

MEAN MONTHLY TEMPERATURE OF EVAPORATION AT GREENWICH.

MONTHS.	YEARS.								
	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January . .		31.9	38 8	38.7	37 4	42.5	34 5	32 6	38.6
February .		38.7	35.0	33.9	31.4	42.2	33 9	41.6	41 4
March . .	44.1	42.9	41.2	40 2	33 4	41.1	37.9	41.6	39 8
April . . .	44 2	41.9	45 0	47 6	43.5	44.8	41.4	44 5	41 5
May . . .	53.6	49.5	50 4	49 1	47 0	51.0	52.1	53 0	49.0
June . . .	52 6	57.4	53.5	55.0	57 5	59.7	53 4	54.4	48.7
July . . .	54.5	55.9	58 2	57.3	56.7	59.8	60.0	57.6	56.2
August . .	57.4	61.2	59.5	54.6	54.7	59.8	59 5	55.2	57.3
September .	55.8	54.8	56 9	54 7	51.5	57.1	51.8	53.2	54.6
October . .	47.1	43.9	46.4	49 3	48.4	48.8	50 9	49.3	
November .	41.5	41.9	42.4	43.1	44.4	44.7	45.6	41.7	
December .	38.3	44.2	43 0	32.2	40 0	31 9	41 6	42 3	

MEAN MONTHLY TEMPERATURE OF THE DEW POINT.

MONTHS.	YEARS.								
	1841.	1842.	1843.	1844.	1845	1846.	1847.	1848.	1849.
	Deg.	Deg	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January . .		30.0	37.3	36.1	35.9	40.8	33.6	31.7	36.4
February .		38 4	33 4	31.8	28.5	39 9	31.0	38 8	38 8
March . .		40.7	38.9	36.6	30.0	38 3	33.5	38.5	36.5
April . . .	40.7	38.3	42 6	44.2	40.6	42 3	37.2	41.4	39 1
May . . .	50 8	46.7	48 8	46 1	44 6	48 0	48.6	48.6	43 9
June . . .	49.2	54.3	51 2	51 6	55.2	56.0	49.8	51,6	48.4
July . . .	51.6	53 2	56.3	54.7	54.4	56 5	56.4	54.6	51.1
August . .	55 0	58.9	57.8	52.3	52.6	57.5	56 1	52 8	53.0
September .	53.7	53 5	54.9	53.2	49.7	54.9	49 7	50 9	51.0
October . .	45 1	42.4	44.7	46 0	46.5	47.2	49.1	47.4	
November .	39.8	40.4	40 9	41.9	42 8	43.1	44 1	38.8	
December .	35.2	43.2	42 0	30.0	37.7	29.4	39.8	40.1	

AMOUNT OF RAIN FALLEN IN EVERY MONTH.

MONTHS.	YEARS.								
	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
	In.	In.	In.	In.	In.	In.	In.	In.	In.
January . .	2.1	1 0	1.4	2.4	2 4	2 8	1.4	1.2	1.6
February .	1.3	1.1	2.4	2 3	0.9	1 5	1.4	2.6	2.2
March . .	1.4	1.9	0.5	2 9	1.5	0 9	0 8	3.1	0.5
April . . .	1.9	0 4	1.7	0 4	0.6	3.1	1.0	3.4	2.2
May . . .	2.1	2.1	3.8	0.4	2.2	1 5	1.4	0.4	3.9
June . . .	2.7	1 0	1.3	1.8	1.9	0.5	1.5	3 5	0.2
July . . .	3 6	3 0	2.4	2.8	1 9	1.5	0.7	2.0	2.1
August . .	2 2	1 8	3.6	2 0	3.1	4.0	2.1	4.3	0.5
September .	4.0	4 0	0.5	1.2	2.1	1.8	1.6	2.4	3.3
October . .	6.0	1.4	4.3	4.0	1.4	5.1	2 0	3.5	
November .	3 7	4.3	2 3	4 3	2 4	1.5	2.0	1.2	
December .	2.4	0.7	0.4	0.4	2 0	1.1	2 0	2,6	

NUMBER OF DAYS ON WHICH RAIN HAS FALLEN IN EVERY MONTH.

MONTHS,	YEARS.								
	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
January . .	20	7	11	13	14	13	14	9	17
February .	19	11	15	16	9	7	11	19	10
March . .	13	14	7	17	9	14	6	21	8
April . . .	15	6	15	5	12	16	11	23	19
May . . .	12	14	23	8	20	8	12	3	15
June . . .	9	6	15	10	13	5	10	20	5
July . . .	18	14	14	13	19	10	4	18	12
August . .	15	8	12	11	17	11	11	29	3
September .	14	17	6	9	10	7	11	14	15
October . .	25	6	22	18	8	20	13	24	
November .	14	20	20	16	18	8	10	12	
December .	18	9	10	9	13	10	11	14	

As Meteorology affects all classes in every condition of life—the agriculturist the mariner, the invalid—it is particularly to the benefit of these individuals that the labour of the meteorologist is directed, and with this view he must work unstiringly onward. If epidemics are produced by atmospheric causes, it is to the successful cultivation of medical-meteorology alone we must look for guidance against them and the mitigation of their virulence, and thus improve the public health and lessen the individual suffering of the invalid.

ON THE CALENDAR.

THE PRINCIPAL ARTICLES OF THE CALENDAR, FOR THE YEAR OF OUR LORD 1850.

	Gregorian, or New Calendar.	Julian, or Old Calendar.
Dominical Letter	F	A
Golden Number	8	8
Roman Indiction	8	8
Solar Cycle	11	11
Epact	17	28

(For remarks upon these articles, see the Almanack for the year 1847.)

CORRESPONDENCE OF THE YEAR 1850 WITH ANCIENT ERAS.

Being, till September 6th, the latter part of the 5610th, and from September 7th the beginning of the 5611th year since the creation of the world, according to the Jews.

Being the 6563rd year of the Julian Period.

Being the 2603rd year since the Foundation of Rome (according to Varro).

Being the 2597th year since the era of Nabonassar, which has been assigned to Wednesday, the 26th of February, of the 3967th year of the Julian Period, which corresponds, according to chronologists, to the 747th, and, according to astronomers, to the 746th year before the birth of Christ.

Being the 2626th year of the Olympiads, or the second year of the 657th Olympiad will begin in July, 1850, if we fix the era of the Olympiads at 775½ years before Christ, or at or about the beginning of July of the year 3938 of the Julian Period.

Being the latter part of the 1266th, and the beginning of the 1267th year (of twelve lunations) since the Hegira, or flight of Mahomet, which it is generally supposed took place on the 18th of July, in the year 622 of the Christian era. The year 1266 commenced on the 16th of November, 1849, and ends on the 5th of November, 1850.

CALENDAR OF THE JEWS FOR THE YEAR 1850.

5610.		1849.		NEW MOONS AND FEASTS.
Tebeth	1	December	16	Rosh Hodesh, or New Moon
,,	10	,,	25	Fast: Siege of Jerusalem
		1850.		
Schebat	1	January	14	New Moon
Adar	1	February	13	New Moon
,,	13	,,	25	Fast of Esther
,,	14	,,	26	Feast of Purim*
,,	15	,,	27	Schuschan Purim
Nisan	1	March	14	New Moon
,,	15	,,	28	Beginning of the Passover*
,,	16	,,	29	Second Feast, or morrow of Passover*
,,	21	April	3	Seventh Feast*
,,	22	,,	4	End of the Passover
Ijar	1	,,	13	New Moon
,,	18	,,	30	Lag Beomer
Sivan	1	May	12	New Moon
,,	6	,,	17	Feast of Weeks of Pentecost*
,,	7	,,	18	Second Feast*
Tamuz	1	June	11	New Moon
,,	17	,,	27	Fast for the taking of the Temple*
Ab	1	July	10	New Moon
,,	9	,,	18	Fast for the burning of the Temple*
Elul	1	August	9	New Moon
5611.				
Tisri	1	September	7	Feast for the New Year*
,,	2	,,	8	Second Feast for the New Year*
,,	3	,,	9	Fast of Gedaliah
,,	10	,,	16	Fast: Reconciliation, or Atonement*
,,	15	,,	21	Feast of the Huts or Tabernacles*
,,	16	,,	22	Second Feast of the Huts*
,,	21	,,	27	Feast of Palms or Branches
,,	22	,,	28	End of Hut, or Congregational Feast*
,,	23	,,	29	Rejoicing for the discovery of the Law*
Marchesvan	1	October	7	New Moon
Kislev	1	November	6	New Moon
,,	25	,,	30	Consecration of the Temple
Tebeth	1	December	6	New Moon
,,	10	,,	15	Fast for the Siege of Jerusalem
		1851.		
Sebat	1	January	4	New Moon

The Anniversaries marked with an asterisk (*) are *to be* strictly observed.

The Jewish Year generally contains 354 days, or 12 Lunations of the Moon; but, in a cycle of 19 years, an intercalary month (Veadar) is 7 times introduced, for the purpose of rendering the average duration of the year quite or nearly correct.

MOHAMMEDAN CALENDAR FOR THE YEAR 1850.

Year.	Names of the Months.		Month begins.	
Hegiri; 1266.	Safar	,,	December 17,	1849.
,, ,,	Rebia I	,,	January 15,	1850.
,, ,,	Rebia II	,,	February 14,	,,
,, ,,	Gomedhi I	,,	March 15,	,,
,, ,,	Gomedhi II	,,	April 14,	,,
,, ,,	Rejeb	,,	May 13,	,,
,, ,,	Scheban	,,	June 12,	,,
,, ,,	Ramedan	(Month of Fasting)	July 11,	,,
,, ,,	Schewale	(Bairam)	August 10,	,,
,, ,,	Dsu'l-Kadah	,,	September 8,	,,
,, ,,	Dsu'l-hejjah	,,	October 8,	,,
Hegiri; 1267.	Moharrem I	,,	November 6,	,,
,, ,,	Safar I	,,	December 6,	,,
,, ,,	Rebia	,,	January 4,	1851.

(For remarks on the Mohammedan year, see the Almanack for the year 1848.)

SIGNS OF THE ZODIAC.

Spring Signs	1 ♈ Aries	Autumn Signs	7 ♎ Libra
	2 ♉ Taurus		8 ♏ Scorpio
	3 ♊ Gemini		9 ♐ Sagittarius
Summer Signs	4 ♋ Cancer	Winter Signs	10 ♑ Capricornus
	5 ♌ Leo		11 ♒ Aquarius
	6 ♍ Virgo		12 ♓ Pisces

FIXED AND MOVEABLE FESTIVALS, ANNIVERSARIES, &c.

Epiphany	Jan.	6	Birth of Queen Victoria	,,	24
Septuagesima Sunday	,,	27	*Trinity Sunday*	,,	26
Martyrdom of King Charles I.	,,	30	Restoration of King Chas. II.		29
Quinquagesima—Shrove Sun.	Feb.	10	*Corpus Christi*	,,	30
Ash Wednesday	,,	13	Accession of Queen Victoria	June	20
Quadragesima—1st Sunday in Lent	,,	17	Proclamation	,,	21
			St. John Baptist—Midsummer Day	,,	24
St. David	March	1			
St. Patrick	,,	17	Birth of Dowager Queen Adelaide	Aug.	13
Palm Sunday	,,	24			
Annunciation—Lady Day	,,	25	St. Michael—Michaelmas Day	Sep.	29
Good Friday	,,	29	Gunpowder Plot	Nov.	5
EASTER SUNDAY	,,	31	Birth of Prince of Wales	,,	9
Low Sunday	April	7	Birth of Prince Albert	,,	26
St. George	,,	23	St. Andrew	,,	30
Rogation Sunday	May	5	*1st Sunday in Advent*	Dec.	1
Ascension Day—Holy Thursday	,,	9	St. Thomas	,,	21
Pentecost—Whit Sunday		19	Christmas Day	,,	25

BEGINNING OF THE SEASONS, 1850.

			D.	H.	M.	
The Sun enters	Capricornus	(Winter begins)	1849, Dec. 21	9	42	P.M.
,,	Aries	(Spring begins)	1850, March 20	11	3	P.M.
,,	Cancer	(Summer begins)	,, June 21	8	0	P.M.
,,	Libra	(Autumn begins)	,, Sept. 23	10	0	A.M.
,,	Capricornus	(Winter begins)	,, Dec. 22	3	38	A.M.

DURATION OF THE SEASONS, AND THE YEAR 1850.

The Sun will be in the	Winter signs	89 Days	1 Hour	21 Minutes
,,	Spring ,,	92 ,,	20 ,,	57 ,,
,,	Summer ,,	93 ,,	14 ,,	0 ,,
,,	Autumn ,,	89 ,,	17 ,,	38 ,,

So that the period of Summer is 4 days, 12 hours, and 39 minutes longer than that of Winter; 17 hours and 3 minutes longer than that of Spring; and 3 days, 21 hours, and 22 minutes longer than that of Autumn.

	D.	H.	M.		°	′	″
The Sun will be on the Equator and going N	1850, March 20	11	3 P.M.,	his declin. being	0	0	0
The Sun will reach his extreme N. declin. at	1850, June 21	8	0 P.M.,	his declin. being	23	27	25
The Sun will be on the Equator, and going S	1850, Sept. 23	10	0 A.M.,	his declin. being	0	0	0
The Sun will be at his extreme S. declination	1850, Dec. 22	3	38 P.M.,	his declin. being	23	27	25

The Sun will be North of the Equator (Spring and Summer) 186 days 10 hours 57 minutes.

The Sun will be South of the Equator (Winter and Autumn) 178 days 18 hours 59 minutes.

The length of the Tropical Year, commencing at the Winter Solstice 1849, and ending at the Winter Solstice 1850 is 365 days 5 hours 56 minutes.

ASTRONOMICAL SYMBOLS AND ABBREVIATIONS EXPLAINED.

⊙	The Sun	☙	Iris	°	Degrees
●	New Moon	☆	Astrea	′	Minutes of Arc
☽	First Quarter of Moon	❀	Flora	″	Seconds of Arc
○	Full Moon	☿	Metis	D.	Days
☾	Last Quarter of Moon	♃	Jupiter	H.	Hours
☿	Mercury	♄	Saturn	M.	Minutes of Time
♀	Venus	♅	Uranus	S.	Seconds of Time
⊕	or ♁ The Earth	♆	Neptune	☉	Sunday
♂	Mars	☊	Ascending Node	☽	Monday
⚶	Vesta	☋	Descending Node	♂	Tuesday
⚵	Juno	N.	North	☿	Wednesday
⚴	Pallas	E.	East	♃	Thursday
⚳	Ceres	S.	South	♀	Friday
⚲	Hebe	W.	West	♄	Saturday

The Symbol ☌ Conjunction, or having the same Longitude or Right Ascension.
,, □ Quadrature, or differing 90° in Longitude or Right Ascension.
,, ☍ Opposition, or differing 180° in Longitude or Right Ascension.

(For explanation of Astronomical terms, see Almanack for the year 1848.)

LAW TERMS, 1850.

As Settled by Statutes 2 George IV., 1 William IV., cap. 70. s. 6 (passed July 23rd, 1830), and 1 William IV., cap. 3, s. 2 (passed December 23rd, 1830).

	Begins			Ends		
Hilary Term	January	11		January	31	
Easter Term	April	15		May	8	
Trinity Term	May	2		June	12	
Michaelmas Term	Nov.	2		Nov.	25	

UNIVERSITY TERMS, 1850.

OXFORD.

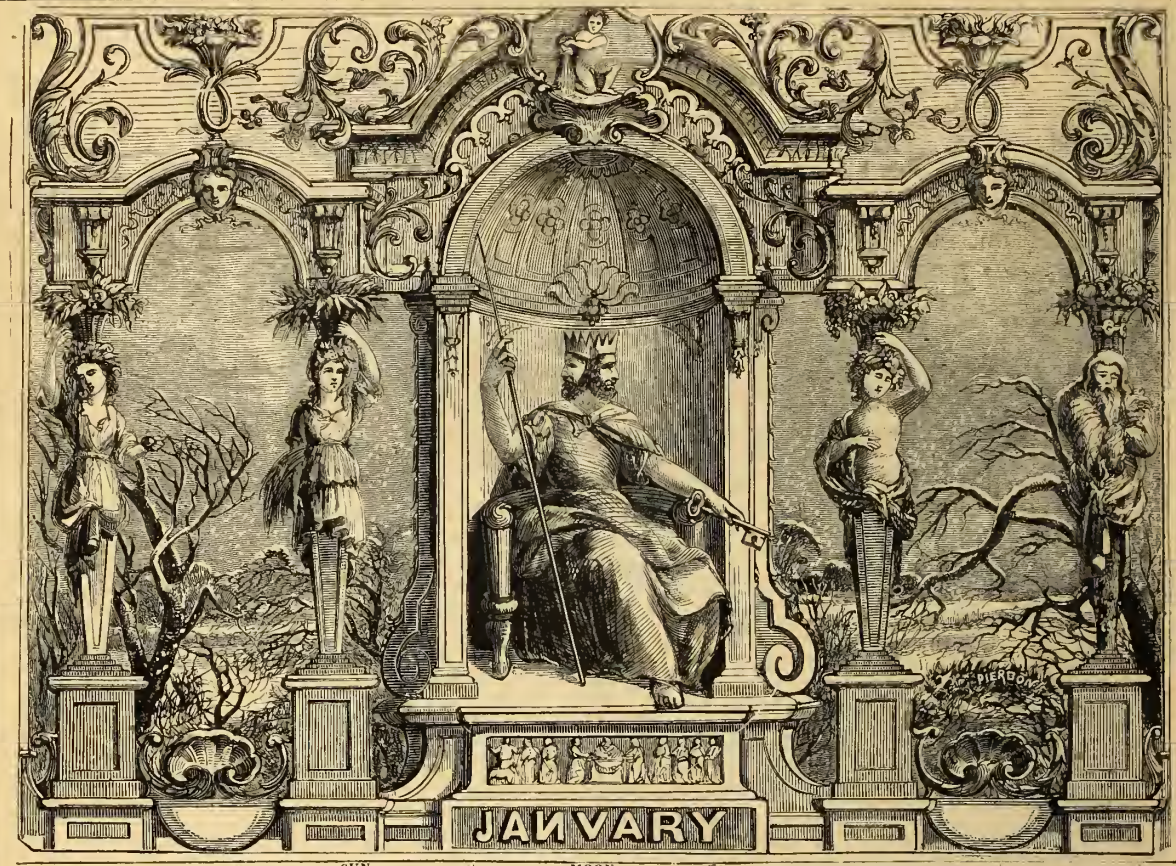
TERMS.	BEGINS.	ENDS.
Lent	January 14	March 24
Easter	April 10	May 18
Trinity	May 22	July 6
Michaelmas	October 10	December 17

The Act, July 2.

CAMBRIDGE.

TERMS.	BEGINS.	DIVIDES.	ENDS.
Lent	Jan. 13	Feb. 16, Noon	March 22
Easter	April 10	May 23, Noon	July 5
Michaelmas	Oct. 10	Nov. 12, Midnight	Dec. 16

The Commencement, July 2.



M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Souths. Height above horizon.	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Morning.	MOON. Souths. Height above horizon.	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock 6h. 8h. 10h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon	Day of the Year
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Tu	*Circumcision*	8 8	3 51	15½	4 0	8 9	2 31	54	10 1		18		3 45	4 10	1
2	W	Length of day 7h. 53m.	8 8	4 19	15¾	4 1	9 25	3 28	50¼	10 35		19		4 35	5 0	2
3	Th	Day breaks 6h 3m A M.	8 8	4 47	15¾	4 2	10 40	4 20	46	11 2		20		5 20	5 50	3
4	F	Twilight ends 6h 6m P.M.	8 8	5 15	15¾	4 3	11 50	5 9	41¼	11 28		21		6 15	6 35	4
5	S	Length of night 16h 4m	8 8	5 42	15¾	4 4	Morning.	5 57	37	11 53		☾		7 0	7 25	5
6	S	*Epiphany*	8 7	6 8	16	4 6	1 0	6 43	32½	Afternoon		23		7 55	8 25	6
7	M	Plough Monday	8 7	6 34	16¼	4 7	2 7	7 28	28¾	0 40		24		9 0	9 35	7
8	Tu	*Lucian.* Fire In-	8 6	7 0	16¼	4 8	3 14	8 14	24¼	1 8		25		10 10	10 44	8
9	W	surance due	8 6	7 25	16½	4 9	4 15	8 59	22½	1 37		26		11 20	11 50	9
10	Th	Alpha Arietis souths 6h 39m P.M.	8 5	7 50	16½	4 10	5 15	9 46	20½	2 13		27		No Tide.	0 20	10
11	F	Hilary Term beg.	8 5	8 14	16¾	4 12	6 10	10 33	19¼	2 54		28		0 45	1 10	11
12	S		8 4	8 37	16¾	4 14	7 1	11 21	19	3 42		29		1 30	1 50	12
13	S	1st S. aft Epiph.	8 3	9 0	17	4 15	7 46	Afternoon	19¼	4 34		○		2 10	2 25	13
14	M	Ox. Term begins	8 2	9 23	17¼	4 17	8 25	0 56	21¼	5 32		1		2 45	3 0	14
15	Tu	Alpha Ceti souths 7h 52m P.M.	8 1	9 43	17¼	4 19	8 58	1 42	23½	6 33		2		3 20	3 35	15
16	W	Bat. of Cor. 1809	8 0	10 5	17¼	4 20	9 28	2 28	26½	7 37		3		3 50	4 10	16
17	Th	Pleiades south 7h 52m P.M.	7 59	10 25	17¾	4 21	9 53	3 13	30¼	8 42		4		4 25	4 40	17
18	F	*Prisca.* Old T. D.	7 58	10 45	18	4 23	10 17	3 58	34¼	9 50		5		4 55	5 15	18
19	S	Aldebaran souths 8h 32m P.M.	7 57	11 3	18¼	4 24	10 39	4 43	38½	10 59		6		5 35	5 50	19
20	S	2d S. aft Epiph.	7 56	11 21	18½	4 26	11 3	5 30	43	Morning.		7		6 10	6 30	20
21	M	*Agnes*	7 55	11 38	18¾	4 28	11 28	6 18	47¼	0 9		☽		6 55	7 20	21
22	Tu	*Vincent*	7 54	11 55	18¾	4 30	11 59	7 10	51¼	1 21		9		7 45	8 15	22
23	W	Day inc. 54m.	7 53	12 10	19	4 32	Afternoon	8 5	54½	2 37		10		8 50	9 30	23
24	Th	Capella souths 8h 51m P.M.	7 52	12 25	19¼	4 33	1 12	9 4	57	3 50		11		10 4	10 45	24
25	F	*Convers. St. Paul*	7 51	12 39	19¼	4 34	2 4	10 5	57¾	5 2		12		11 25	At Midnight.	25
26	S	Rigel souths 8h 44m P.M.	7 50	12 52	19¾	4 36	3 8	11 8	57½	6 7		13		No Tide.	0 30	26
27	S	Septuagesima	7 49	13 4	20	4 38	4 19	Morning.	—	7 4		14		0 59	1 30	27
28	M	Length of day 8h 52m	7 48	13 16	20¼	4 40	5 38	0 10	55½	7 51		●		1 54	2 20	28
29	Tu	Beta Tauri souths 8h 42m P.M.	7 46	13 27	20¾	4 42	6 56	1 10	52¼	8 26		16		2 47	3 15	29
30	W	K. Chas. I. Mar.	7 45	13 37	20¾	4 44	8 16	2 6	48¼	9 2		17		3 35	4 0	30
31	Th	Hilary Term ends	7 43	13 45	21¼	4 46	9 30	2 59	43½	9 29		18		4 20	4 40	31

JANUARY.

The Sun is situated south of the Equator, or he has south declination, and is in the sign Capricornus (the Goat) till the 20th, having been in that sign 29 days, 10 hours, 38 minutes. On this day, at 8h. 20m. A.M., he enters the sign Aquarius (the Water-bearer).

On the 1st day his distance from the earth is 93,408,000 miles, being the least in the year. He rises on the 1st at 3° S. of the S.E. by E.; on the 16th, at the S.E. by E.; and on the last day at 5¼° S. of the E.S.E. He sets on the same days at 3° S. of the S.W. by W., at the S.W. by W., and at 5¼° S. of the W.S.W. points of the horizon respectively.

The Moon is in the constellation Leo till the 3d, on which day she passes into Virgo; on the 7th, into Libra; on the 9th, into Scorpio and Ophiuchus. She is in Sagittarius on the 11th, 12th, and 13th; in Capricornus, on the 14th and 15th; in Aquarius, on the 16th; in Pisces and Cetus, alternately, till the 21st; in Aries, on the 22d; in Taurus, on the 23d and 24th; in Gemini, on the 25th, 26th, and 27th; and in Leo, from the 28th to the end of the month.

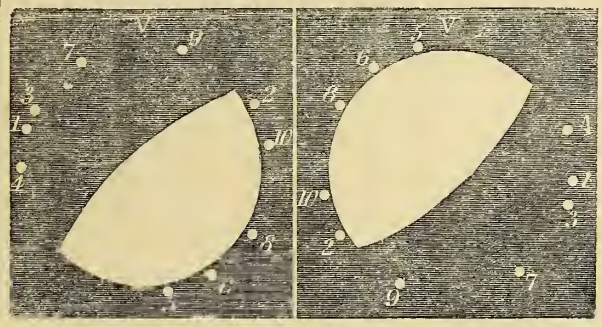
She is above the horizon when the Sun is below, during the morning hours, at the beginning and at the end of the month; and the evening hours, from the middle till nearly the end of the month.

She is situated N. of the Equator till the 4th; is on the Equator at 9h. P.M. on this day; is at her greatest south declination on the 12th; is on the Equator again on the 19th; reaches her extreme N. decliuation on the 26th; and is a little N. of the Equator at the end of the month.

She is near Jupiter on the 3d, Venus on the 12th, Mercury on the 14th, Saturn on the 19th, Uranus on the 20th, Mars on the 24th, and Jupiter again on the 30th, at midnight.

On January 23d several stars are occulted by the Moon; and early on the morning of the 24th the bright star Aldebaran will be occulted. The disappearances of the stars will take place at the dark limb of the Moon, and their re-appearances at the bright limb. The Moon will be seen to approach Aldebaran for some time before it disappears. The annexed diagrams exhibit the places at which the several phenomena take place, both for telescopes which do, and for those which do not, invert. The diagram in both cases is drawn more especially for the appearance of the Moon at the time of the occultation of Aldebaran; the places marked for the other occultations will, therefore, be understood as having the same relative position to the highest point of the Moon at the times of their occurrence, as seen through the telescope, as they have to the letter V in the diagram.

OCCULTATIONS OF STARS BY THE MOON JANUARY 23 AND 24, 1850



By direct vision. As seen through an inverting telescope.

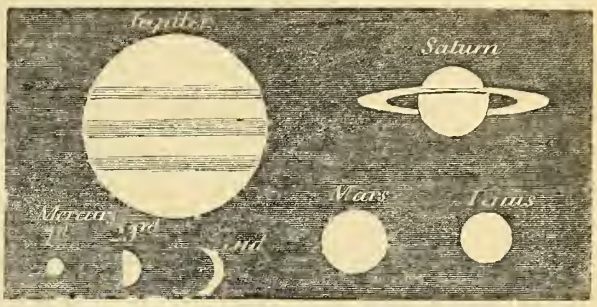
		D.	H.	M.		D.	H.	M.	
Gamma Tauri	will disappear at the place marked	1 at 23	5	4	P.M.	2 at 23	6	6	P.M.
Theta 1 Tauri	„	3 at 23	9	42	P.M.	„	6 at 23	10	49 P.M.
Theta 2 Tauri	„	4 at 23	9	49	P.M.	„	5 at 23	10	43 P.M.
A Star	„	7 at 23	10	47	P.M.	„	8 at 23	11	52 P.M.
Aldebaran	„	9 at 24	1	32	A.M.	„	10 at 24	2	1 A.M.

and re-appear at the place marked

Mercury is in the constellation Sagittarius till the 6th; in Capricornus, from the 6th to the 26th; in Aquarius, on the 27th, 28th, and 29th; and, on the last day, enters Capricornus.

He sets on the 1st, at 4h. 26m. P.M.; on the 5th, at 4h. 46m.; on the 10th, at 5h. 13m.; on the 15th, at 5h. 41m.; on the 20th, at 6h. 6m.; on the 25th, at 6h. 19m.; and on the 31st, at 6h. 8m. P.M. These times are 0h. 26m., 0h. 42m., 1h. 3m., 1h. 22m., 1h. 40m., 1h. 45m., and 1h. 22m. after sunset respectively. He is, therefore, favourably situated after the Sun sets, from the 10th to the end of the month. The best times are from the 20th to the 28th. He sets on the 1st at 5° S. of S.W. by W.; on the 10th at S.W. by W.; on the 23d at W.S.W.; and on the last day at 5° N. of W.S.W. He is moving eastward among the stars till the 28th; is stationary on the 29th; and begins to move westward on the 30th. His path among the stars, during this mouth, is shown in the diagram in February.

RELATIVE TELESCOPIC APPEARANCE OF THE PLANETS IN JANUARY, 1850.



Scale, 40 seconds of arc to one inch.

Venus is in the constellation Sagittarius to the 25th, and in that of Capricornus from the 26th. She is a morning star throughout the month, but not favourably situated for observation. She rises on the 1st at 7h. 5m.; and on the last day at 7h. 30m. near the S.E. by E. point of the horizon.

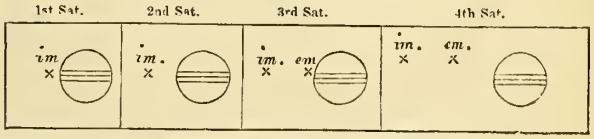
Mars is in the constellation Taurus. He is visible throughout the night, and sets on the 1st at 7h. 21m. A.M.; on the 15th at 6h. 10m. A.M.; and on the last day at 5h. 5m. A.M., near the N.W. point of the horizon.

Jupiter is in the constellation Virgo throughout the month.

He rises on the 1st at 10h. 27m. P.M., and on the last day at 8h. 24m. P.M., midway between the E. and E. by N. points of the horizon; and he sets after the Sun rises.

Jupiter's Satellites.—Several immersions of the 1st, 2d, and 3d Satellites, and an emersion of the 3d, and another of the 4th, take place. The relative position of the Satellite to Jupiter at the instant of the eclipse is shown in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JOPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Cetus throughout the month.

He is an evening star, and sets at a point a little S. of W. at 11h. 23m. P.M. on the 1st, and at 9h. 37m. P.M. on the last day. He souths at an altitude of 37°⅔ nearly.

Uranus is in the constellation Pisces throughout the month.

He sets near the W. by N. on the 1st, at 1h. 28m. A.M., and on the last day at 11h. 29m P.M. He souths on the 15th, at 5h 45m. P.M, at an altitude of 46¾°.

Neptune sets on the 1st at 8h. 43m. P.M.; on the 15th at 7h. 51m. P.M.; and on the last day at 6h. 51m. P.M., midway between the W. by S. and the W.S.W. points of the horizon.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon		Venus Morning		Mars Afternoon		Jupiter. Morning		Saturn. Afternoon		Neptune Afternoon	
	H.	M	H	M	H.	M.	H.	M	H.	M.	H.	M.
1	0	39	11	0	10	36	4	54	5	27	3	37
6	0	54	11	8	10	10	4	35	5	8	3	18
11	1	9	11	16	9	46	4	15	4	50	2	59
16	1	20	11	23	9	24	3	55	4	31	2	40
21	1	27	11	31	9	3	3	35	4	13	2	21
26	1	22	11	38	8	43	3	15	3	55	2	2
31	1	3	11	44	8	25	2	54	3	37	1	42

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.				3rd Sat. Im I. Emer. E.				
D.	H.	M.		D.	H.	M.		
5	2	6	A.M.	4	2	27	A.M.	E.
12	3	59	A.M.	11	3	5	A.M.	I.
19	5	52	A.M.	11	6	24	A.M.	E.
21	0	21	A.M.	18	7	2	A.M.	I.
28	2	14	A.M.					

2nd. Sat.			
10	0	43	A.M.
17	3	18	A.M.
24	5	53	A.M.

4th. Sat.				
18	4	12	A.M.	I.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.			At which limb of the Moon.	Between what Latitudes visible.
		D.	H.	M.		
45 Leonis	6	2	6	30 A.M	Dark	7° N. &
		2	7	25 A.M.	Bright	89° N.
Xi 2 Ceti	4	21	5	4 P.M.	Bright	22° N. &
		21	5	50 P.M.	Dark	90° N.
f Tauri	5	22	9	57 P.M.	Bright	10° N. &
		22	10	52 P.M.	Dark	90° N.
115 Tauri	5	24	8	16 P.M.	Bright	9° N. &
		24	9	29 P.M.	Dark	74° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.		Days of the Month.
Last Quarter	5	8	37	A.M.	1
New Moon ..	13	11	19	A.M.	6
First Quarter	21	9	40	A.M.	11
Full Moon .	28	0	51	A.M.	16
Apogee	12	8		A.M.	21
Perigee ..	27	4		A.M.	26

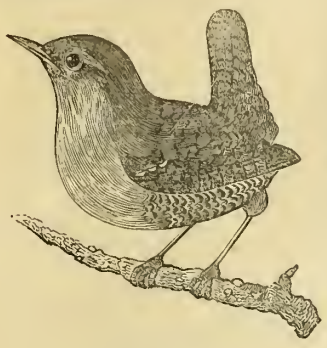
RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	Declination South	VENUS. Right Ascension	Declination South.	MARS. Right Ascension	Declination North.	JUPITER. Right Ascension	Declination North.	SATURN. Right Ascension	Declination South.	URANUS. Right Ascension	Declination North.	NEPTUNE. Right Ascension	Declination South.
	19h	22m	24°	17′	17h.	44m	23°	10′	5h.	21m	26°	29′	11h	36m	3°	57′	0h.	11m	1°	26′	1h.	24m	8°	10′	22h.	20m	11°	11′
1	19	57	22	53	18	11	23	24	5	15	26	25	11	37	3	56	0	12	1	19	1	2t	8	11	22	20	11	7
6	20	31	20	50	18	38	23	21	5	11	26	20	11	37	3	58	0	13	1	11	1	24	8	12	22	21	11	4
11	21	3	18	14	19	6	22	59	5	8	26	14	11	36	4	2	0	14	1	1	1	24	8	13	22	21	11	0
16	21	29	15	21	19	33	22	19	5	6	26	10	11	36	4	7	0	15	0	51	1	24	8	15	22	22	10	57
21	21	44	12	43	19	59	21	23	5	6	26	6	11	35	4	15	0	17	0	41	1	25	8	18	22	22	10	54

JANUARY.—SOLE FISHING.

NOTES ON NATURAL HISTORY.—JANUARY.

THE common wren, "Kitty wren" as the bird is familiarly called by children, is one of the few of the feathered race which remain near dwelling-houses nearly all the year. Like its companion, the robin, it seems quite indifferent to the cold; and it hops about as gaily when frost and snow are on the ground, as in the brightest days of summer. The female is very particular about her nest: sometimes, when she has half finished it, she appears to take a dislike to the spot; and, after surveying it carefully, and hopping from post to tree, and from tree to rail, and holding her little head first on one side and then on the other, as if she were weighing all the advantages and disadvantages of the place, she seems finally to make up her mind, and either sets to work to finish her nest out of hand, or she flies off to some more convenient situation, where she begins a new one. Wherever the nest may be placed, the wren is never satisfied with its situation unless it is well sheltered from the rain; and on this account she always chooses a nook under the thatch, the cavity in a hollow tree, the projecting bank of a hedge, a hole in a hayrick, or some similarly protected place. The material used in building the nest is generally that which is nearest at hand, and, of course, differs in different situations; one that was built near a schoolroom being actually constructed in great part of the scrapings and feathers of writing quills! The wren is generally very desirous to conceal her nest; and when she has brought a bundle of moss almost as large as herself, she will hop about from branch to branch, carrying her load with her, "anxiously waiting for some slow-walking passenger to move away before she ventures to approach the spot where the nest is in progress." Mr. Knapp, in his "Journal of a Naturalist," relates, among the stratagems of a wren to conceal her nest from observation, that she had formed a hollow space in the thatch inside a cow-shed, in which she had placed her nest by the side of a rafter, and finished it with her usual neatness; but, lest the orifice of the cell should engage attention, she had negligently hung a ragged piece of moss on the straw-work, concealing the entrance and apparently proceeding from the rafter; and so perfect was the deception, that it would not have been noticed, had not the bird betrayed her own secret by darting out. When the wren is sitting, if she sees any one approaching her, she gives utterance to a peculiar cry of rage, which sounds like "*Check! check!*" and she repeats this many times with vehemence, as though she were scolding outrageously, particularly when the intruder appears frightened and runs away; in which case the wren sometimes follows to a considerable distance, with loud manifestations of anger. The nest is very large in proportion to the small size of the bird, and so deep that the young ones are kept almost in darkness. The young are very numerous, as many as sixteen having been found in one nest; and both their number and the darkness of their abode have been alluded to by Grahame, in his poem on the birds of Scotland:—



COMMON WREN.

> The numerous progeny, claimants for food
> Supplied by two small bills, and feeble wings
> Of narrow range, supplied—ay, duly fed—
> Fed in the dark, and yet not one forgot.

The wren, in England, is generally kindly treated, even by boys; but, in Ireland, hunting the wren is a favourite pastime on Christmas Day. The hunting is performed with two sticks, one of which is used to beat the bushes, and the other to throw at the bird. Mr. Yarrell mentions that "it was the boast of an old man who died at the age of a hundred, that he had hunted the wren for the last eighty years, on Christmas Day." On St. Stephen's Day (December 26th) the children used to exhibit the slaughtered birds on an ivy-bush, decked with ribbons of various colours, and to carry them about, singing—

> The wren! the wren! the king of birds!
> The best of all that live in the furze;

and to collect money to bury the wren. In some places the wren itself is hunted on St. Stephen's Day. Happily, this barbarous custom is now abolished, except in some few places in the south of Ireland. The feeling of the children in England with respect to the wren is very different; as, so far from hunting the bird, or wishing to injure it in any way, they have a superstitious feeling that it is unlucky to hurt it, and, consequently, boys that delight in attacking every other kind of bird that falls in their way, respect the wren, and would tremble at the thought of killing one.

In January, vegetation is, of course, suspended; and the only green leaves that appear through the snow are those of evergreens, particularly those of the pine and fir tribe, which, when the snow is partially melted and again frozen, have a very singular and beautiful effect; as the delicate tracery of their branches, gracefully drooping from the weight of the brilliant icicles which hang from them, is so striking as to give the idea of the garden of a fairy palace rather than any object of ordinary occurrence. After a hoar frost, the trees are still more beautiful. Trees that shed their leaves are generally considered to present no beauty in winter; and yet it is impossible to look at the leafless limbs of a large tree in the depth of winter, particularly when the earth is covered with snow, without being powerfully struck with the wonderful difference presented by the tracery of different trees when no longer obscured by the leaves, and the outline of their numerous branches is clearly shown by the white ground beyond. Any one accustomed to trees could never, even in the month of January, mistake an oak for an ash or a poplar. The sturdiness of the oak, and the shortness of its trunk in proportion to its thickness, and the peculiarly rugged character of its branches, mark it as distinctly in the middle of winter as when it is covered with leaves, or even with acorns. The black Italian poplar, on the contrary, has its stem exceedingly long in proportion to its thickness; and its branches, though very numerous, do not extend far from the tree, and are extremely slender, generally producing tufts of small twigs at the extremity. The Lombardy poplar is still more peculiar in its appearance. It grows very high in proportion to the thickness of its stem, and its long slender branches all taper upwards, so as to give the whole tree the shape of a flame. The willow has long, slender, drooping branches. The plane trees generally retain their seed-vessels, which hang like balls on long slender stems from the leafless branches; and these trees are also known by their bark falling off in large plates, so as to look exactly as though the tree had been injured by some mischievous boy. There are some large plane trees in Hyde-park, which often excite indignation from this appearance in the minds of those who are not acquainted with the general habit of the tree. The American plane tree only ripens its seeds in this country in warm summers; and as, when the seed-vessels burst, and the seeds are scattered, each being furnished with a little white feathery plume, they have a cottony appearance, this tree, in North America, is called the cotton-tree. The black Italian poplar has its seeds enveloped in a white cottony down, which falls in such abundance when the seed-vessels burst, as to entitle it also to be called the cotton-tree, as the ground at the foot of the tree is often quite covered over with white cotton, which looks as though it could be used for carding and spioning. The catkin of the black English poplar, on the contrary, is red, and, when it falls, it looks so like the larva of the goat-moth, that children are sometimes afraid to pick it up. The elm, when devoid of leaves, has much less grandeur about it than the oak. The Scotch elm has widely-spreading branches; but those of the English elm are small, and somewhat slender in comparison with the size of the tree. The bark is also rough, particularly that of the variety called the Cornish elm, which is very rough, and has often deep fissures in it. The weeping elm is particularly beautiful; and though a few years ago it was comparatively unknown, it is now becoming common in plantations. The beech is remarkable for the smoothness of its bark; and the birch for its silvery hue, and also for the lightness and elegance of its branches, which, in early spring, are adorned by long feathery catkins, which are almost as ornamental as flowers.

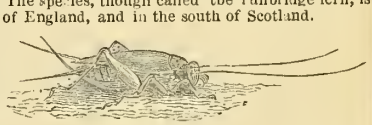
The lower shrubs are seldom ornamental in winter, unless the season is mild, when the *Laurustinus* is covered with flowers. It is singular enough that the *Aucuba japónica*, though it is a native of Japan, will bear the severest frost uninjured, though the sweet bay and many other similar plants are killed. The *Aucuba japónica* is interesting in other points of view; and it is remarkable that, though it has been a common garden shrub in this country for the last sixty years, it is only a variety with variegated leaves that has been introduced, and it has never been known to produce fruit in Great Britain. The fruit is said to be a kind of nut, but, from the general appearance of the tree, it appears much more likely that it is a berry. It is nearly allied to the dogwood, and some botanists have supposed it possible that a hybrid might be raised between it and that tree. The holly, the ivy, and many other trees, are ornamental during winter, from their berries; and the *Chimonánthus frágrans* and the *Hamamèlis*, from their flowers. The flowers of the *Chimonánthus* are of a pale straw-colour, with a dark purple spot, and they are delightfully fragrant. The flowers of *Gárrya elliptica* also appear at this season, hanging down in long rows, like Love-lies-bleeding in form, but of a greenish colour.

When the ground is covered with snow, few ferns are visible; but, as soon as the snow begins to melt away, the rocks about Tunbridge Wells, and in many other places, are covered with the evergreen kinds; and among them is occasionally seen an elegant little fern (*Hymenophýllum tunbridgénse*), which hangs

HYMENOPHYLLUM TUNBRIDGENSE.

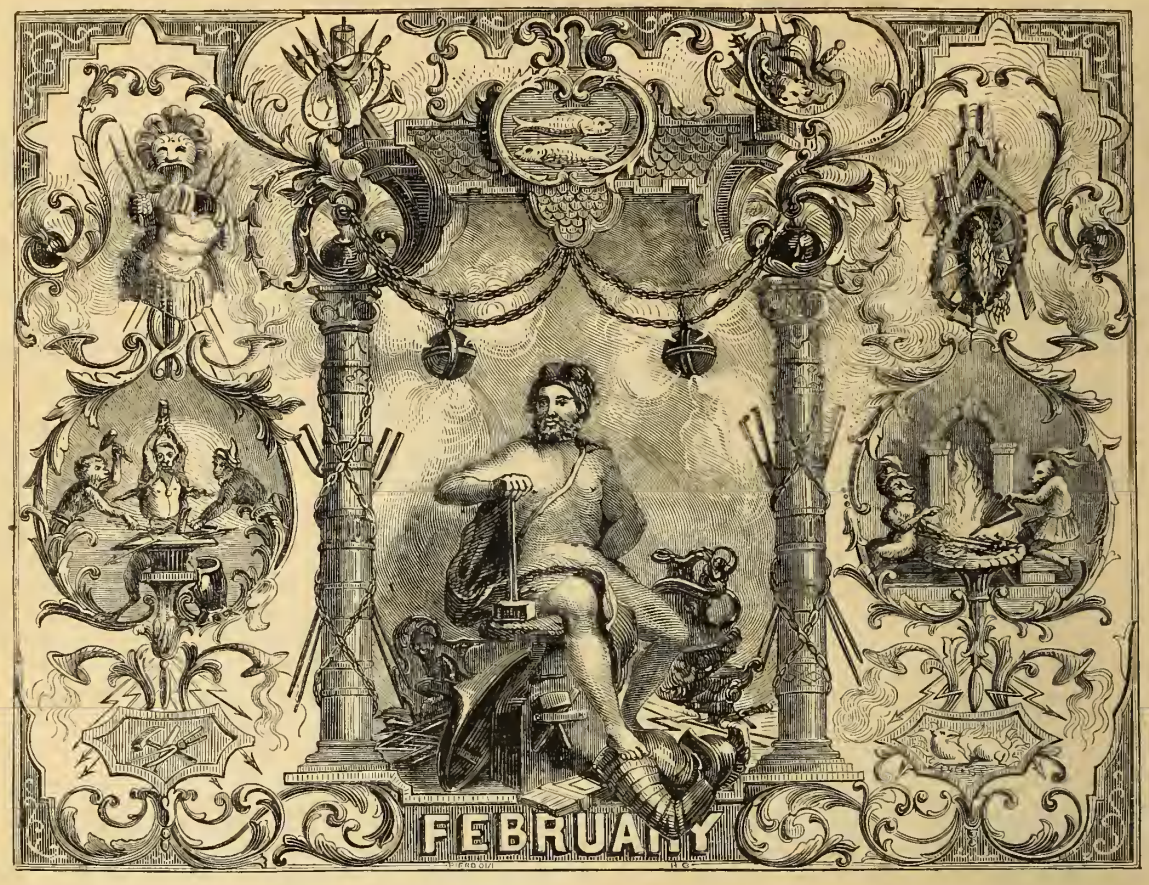
down, "clothing," as Sowerby expresses it, "the shaded, perpendicular faces of dripping rocks and caverns," with its filmy fronds, which lie over one another, "like the half-ruffled plumage of a bird," and form a kind of tapestry of half transparent, shaded green. These ferns are remarkable for the extreme delicacy of their leaves, or fronds, which become brown or shrivelled if exposed to the sun and a drying air even for a few hours, but which are extremely beautiful when quite fresh and moist. The species, though called the Tunbridge fern, is yet found in many other parts of England, and in the south of Scotland.

At this season of the year, the few insects that are still alive are mostly in a torpid state, except the cricket (*Achèta doméstica*), whose merry chirp is still louder in winter than in summer, on account of the additional fires that are required at this season; as the cricket, perhaps more than any other insect, enjoys warmth. When we hear the chirp of a cricket, we naturally suppose that it is a sound uttered from the mouth, but this is by no means the case. The cricket has two wings, which are covered with wing-cases of a leathery consistency, and these wing-cases the cricket rubs against its body with a very brisk motion, whereby it produces its sound. We are told that crickets are used in Africa to promote sleep; but in this country they appear more likely to destroy it, as the noise they make is sometimes so loud as to be extremely disagreeable. It has been remarked that the chirp becomes louder in proportion as the heat increases, and it is extremely difficult to silence the crickets in any way but by putting out the fire.



THE CRICKET.

Most insects die at the commencement of winter, leaving their eggs to continue their species; and these, by a wonderful provision of nature, they lay, late in autumn, on the stems and branches of plants, and not upon the leaves, as they do in summer—the wonderful instinct that has been implanted in them warning them that thus only can they secure the welfare of their progeny. It has also been observed that the eggs which are to be hatched in summer are fixed only very slightly to the leaves on which the young are to feed; but in autumn the eggs which are attached to the trunk and branches are fixed firmly and covered with the greatest care, so as to enable them to resist all the alternations of weather to which it is likely they will be exposed.



M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Morning	MOON. Souths. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 6h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	F	Length of day 9h 7m	7 41	13 54	21 1/4	4 48	10 44	3 49	39	9 51		19		5 5	5 25	32
2	S	*Purifi.* Cand. D.	7 40	14 1	21 3/4	4 49	11 53	4 37	34 1/2	10 20		20		5 45	6 5	33
3	S	SEXAGESIMA S.	7 38	14 8	22	4 50	Morning.	5 24	30 1/4	10 42		21		6 30	6 50	34
4	M	Pleiades south 6h 40m P.M.	7 36	14 14	22 1/4	4 52	1 1	6 10	26 1/2	11 11		☾		7 15	7 35	35
5	Tu	*Agatha*	7 34	14 19	22 1/2	4 54	2 5	6 56	23 1/2	11 41		23		8 5	8 35	36
6	W	Length of night 14h 36m	7 32	14 23	22 3/4	4 56	3 8	7 43	21 1/4	Afternoon		24		9 10	9 50	37
7	Th	Aldebaran souths 7h 17m P.M.	7 30	14 27	23 1/4	4 57	4 5	8 30	19 3/4	0 53		25		10 25	11 5	38
8	F	Half-Qu. Day	7 29	14 29	23 1/2	4 59	4 56	9 17	19	1 37		26		11 40	No Tide.	39
9	S	Capella souths 7h 48m P.M	7 27	14 31	23 3/4	5 0	5 43	10 5	19 1/2	2 28		27		0 17	0 44	40
10	S	QUINQUAGESIMA	7 25	14 32	24 1/4	5 2	6 24	10 52	20 1/4	3 25		28		1 6	1 30	41
11	M	[or SHROVE S.	7 24	14 33	24 1/3	5 4	7 0	11 39	22 3/4	4 23		29		1 50	2 10	42
12	Tu	*Shrove Tuesday*	7 22	14 32	24 3/4	5 6	7 31	Afternoon	25 1/2	5 29		○		2 25	2 45	43
13	W	*Ash W.* Lent b.	7 20	14 31	25 1/4	5 8	7 56	1 11	29	6 34		1		3 0	3 15	44
14	Th	*St. Val.* O. C. D.	7 18	14 29	25 1/2	5 10	8 22	1 57	33	7 40		2		3 35	3 50	45
15	F	Rigel souths 7h 25m P.M.	7 16	14 26	25 3/4	5 12	8 46	2 42	37 1/4	8 50		3		4 5	4 20	46
16	S	Camb. Term div.	7 10	14 23	26 1/4	5 14	9 8	3 28	41 1/3	9 59		4		4 35	4 55	47
17	S	1ST SUN. in LENT	7 12	14 19	26 1/2	5 16	9 33	4 15	45 3/4	11 8		5		5 10	5 30	48
18	M	Day inc. 2h.20m.	7 11	14 14	26 3/4	5 18	10 1	5 5	50	Morning.		6		5 50	6 5	49
19	Tu	Length of day 10h 10m	7 9	14 8	27 1/4	5 19	10 31	5 57	53 1/2	0 22		☽		6 30	6 50	50
20	W	*Ember Week*	7 7	14 2	27 1/3	5 21	11 9	6 52	56	1 34		8		7 15	7 40	51
21	Th	Beta Tauri souths 7h 12m P.M.	7 5	13 55	28	5 23	11 52	7 50	57 1/2	2 45		9		8 15	8 55	52
22	F	Day brk. 5h. 9m.	7 3	13 47	28 1/4	5 25	Afternoon	8 50	57 3/4	3 51		10		9 35	10 15	53
23	S	Alpha Orionis souths 7h 34m P.M.	7 1	13 39	28 3/4	5 27	1 55	9 51	56 3/4	4 50		11		11 0	11 45	54
24	S	2ND S. in LENT.	6 59	13 30	29	5 29	3 7	10 50	54	5 40		12		No Tide.	0 20	55
25	M	[*Matthias*	6 56	13 21	29 1/3	5 30	4 26	11 48	48 3/4	6 22		13		0 50	1 20	56
26	Tu	Sirius souths 8h 14m P.M.	6 54	13 11	29 3/4	5 32	5 44	Morning.	—	6 56		●		1 45	2 10	57
27	W	Twilight ends 7h 27m P.M.	6 52	13 0	30 1/4	5 34	7 2	0 43	49 3/4	7 28		15		2 35	2 55	58
28	Th	Castor souths 7h 52m P.M.	6 50	12 49	30 1/3	5 36	8 18	1 35	41 1/3	7 55		16		3 20	3 40	59

FEBRUARY.

The Sun is situated south of the Equator, and is moving north. He is in the sign Aquarius till the 18th, having been in this sign 29 days, 14 hours, 45 minutes. On the 18th, at 11h. 5m. P.M., he enters the sign Pisces (the Fishes). His distance from the Earth on the 1st day is 93,643,000 miles. He rises on the 11th at the E.S.E.; and on the last day at 1°¼ S. of E. by S. He sets on the same days at the W.S.W., and about 1°¼ S. of the W. by S. points of the horizon.

On the 12th day there will be an Eclipse of the Sun, but it will not be visble in Europe. It will be visible at places sitnated for somo distance both north and south of the Equator, whose longitudes east of Greenwich are less than 160°. It will be central and annular at the island of Madagascar, and parts of the Indian Ocean. The Eclipse begins on the 12th, at 3h. 26m. A.M., at a place whose latitude is 11°¼ S., and whose longitude is 39°¾ E., and ends on the 12th, at 9h. 33m. A.M., at a place whose latitude is 15° nearly north, and longitude 126°½ east.

The Moon is in Virgo till the 3rd; then in Libra till the morning of the 5th; in Ophiuchus on the 5th and 6th; Sagittarius on the 7th, 8th, and 9th; in Capricornus on the 10th and 11th; in Aquarius on the 12th and 13th; on the boundaries of Pisces and Cetus till the 17th, and skirting Aries and Cetus on the 18th; in Taurus on the 19th and 20th; in part of Orion, crossing the Milky Way, on the 21st; in Gemini on the 22nd; in Cancer on the 23rd and 24th; in Leo on the 25th and 26th; and in Virgo from the 27th to the end of the month.

She is above the horizon when the Sun is below, during the morning honrs at the beginning and at the end of the month, and the evening hours from the middle till towards the end of the month.

She is on the Equator on the 1st; at her greatest sonth declination on the 8th; is on the Equator again on the 15th; at her extreme north declination on the 22nd; and on the Equator a third time this month on the last day.

She is near Mercury and Venus on the 11th; Saturn on the 15th; Uranus on the 16th; Mars on the 21st; and Jupiter on the 27th.

Mercury is in the constellation Capricornus till the 5th, on which day he passes into Aqnarius.

He is an evening star at the heginning, and a morning star at the end of the month. On the 1st he sets at 6h. 3m., being 1h. 15m. after the Snn has set; on the 5th, at 5h. 32m., being 38 minutes after the Sun; and on the 9th, he sets before the Sun. He rises on the 3rd at 7h. 37m.; on the 15th, at 6h. 21m., being 55m. before the Sun; on the 20th, at 6h. 5m., being 1h. 2m. before the Sun. The times of rising from the 18th to the 26th precede the times of sunrising by quantities somewhat more than an hour; and on the 28th he rises at 5h. 52m., being 58 minutes before the Sun. He is favourably situated after sunset during the first three days, and before sunrise between the 18th and the 26th. He sets at the beginning of the month about 6°½ S. of the W. by S. point of the horizon; and he rises about the middle of the month near the E S.E. point of the horizon. He is near Venus on the 9th, and the Moon on the 11th; but these phenomena are not well situated for observation. He moves westward amongst the stars till the 17th; is almost stationary till the 20th; and moves eastward from the 21st, as shewn in the annexed diagram.

PATH OF MERCURY FROM JANUARY 1 TO MARCH 31, 1850.

Scale, 24 degrees to one inch.

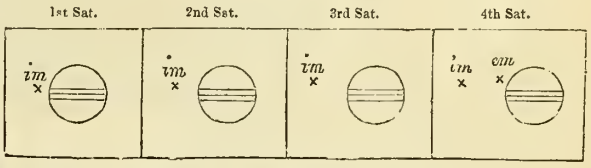
Venus is in the constellation Capricornus till the 15th, and in that of Aquarius from the 16th. She rises and sets at nearly the same times as the Sun, and is, therefore, unfavourably situated for observation. She moves eastward among the stars; is in inferior conjunction with the Sun on the 7th; is near Mercury on the 9th, the Moon on the 11th, and Saturn on the 15th. Her telescopic appearance is the same as in January.

Mars is in the constellation Taurus throughout the month; on the 16th again touches tho Milky Way; and, after this time, he is situated within it. He is visible almost throughout the night, and sets on the 1st, at 5h. 2m. A.M.; on the 15th, at 4h. 16m. A.M.; and on the last day, at 3h. 44m. A M., near the N.W. point of the horizon. He moves very slowly eastward among the stars; is near the Moon on the 21st; and souths at an altitude of 64°½. His motion and relative position to the stars are shown in the diagram in March.

Jupiter is in the constellation Virgo till about the 11th, when he passes into Leo. He rises on the 1st, at 8h. 20m. P.M.; and on the last day, at 6h. 16m. P.M., at nearly the E. by N. point of the horizon. He is visible throughout the night; souths on the 1st at an altitude of 43°, increasing to 44° on the last day. He moves slowly westward among the stars, and is near the Moon on the 27th. See the diagram, shewing his path in the heavens and relative position to the large stars near him, inserted in May.

Jupiter's Satellites.—The disappearance of the satellite by entering into the shadow of the planet is called an immersion; and its re-appearance at coming ont of the shadow is called an emersion. These phenomena, called eclipses of Jupiter's Satellites, generally take place when the Satellite is apparently at some distance from the body of tho planet; except at times when he souths at about midnight, when they take place near to his body. When Jupiter souths before midnight, both the immersions and the emersions happen on the eastern side; but when he souths after midnight, they take place on the western side of the planet: and if viewed by means of a telescope which does not invert, such would be their positions; but if an inverting telescope be directed to Jupiter, their appearances will be directly the contrary—the positions of the satellites, which are really on one side, will appear to be on the opposite side. When Jupiter souths after midnight, the immersions only of the first satellite are visible; and when he souths before midnight, the emersions only. It rarely happens that both the immersion and emersion of the second satellite can be observed at the same eclipse, but both phenomena are generally visible of the third and fourth satellites. Jupiter souths this year at midnight on the 12th of March. Several immersions and two emersions of the 4th are visible: the relative position of the satellite to Jupiter, at the instant of the eclipse, is shown in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Cetus throughout the month.

He is an evening star, and sets at the W. point of the horizon on the 1st, at 9h. 34m. P.M.; and on the last day, at 8h. 7m. P.M. He souths at an altitude of 38°½ nearly. He is near the Moon on the 15th. For his path in the heavens, see the diagram in September.

Uranus is in the constellation Pisces throughout the month. He sets near the W. by N. on the 1st, at 11h. 24m. P.M.; and on the last day, at 9h. 46m. P.M. He souths on the 15th, at 3h. 46m. P.M., at an altitude of 47°. He moves slowly eastward among the stars, and is near the Moon on the 16th.

Neptune sets on the 1st, at 6h. 48m. P.M.; on the 15th, at 5h. 53m. P.M.; and on the last day, at 5h. 6m. P.M., midway between the W. by S. and the W.S.W. points of the horizon.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Morning.	Mars. Afternoon	Jupiter. Morning.	Saturn. Afternoon	Neptune. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	0 57	11 46	8 21	2 50	3 33	1 39
6	0 19	11 52	8 5	2 28	3 15	1 19
11	Morning	11 57	7 49	2 7	2 57	1 0
16	11 3	Aftera.	7 35	1 46	2 39	0 41
21	10 42	0 7	7 21	1 24	2 22	0 22
26	10 31	0 11	7 8	1 2	2 4	0 3
28	10 29	0 13	7 3	0 53	1 57	Morning

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.	3rd Sat. Im. I.	3rd Sat. Emer. E.
D. H. M.	D. H. M.	
4 4 7 A.M.	15 10 54 P.M. I.	
5 10 35 P.M.	23 2 52 A.M. I.	
11 6 1 A.M.		
13 0 29 A.M.		
20 2 22 A.M.		
21 8 51 P.M.		
27 4 16 A.M.		
28 10 44 P.M.	4th Sat.	
2nd Sat.	3 10 11 A.M. I.	
	4 1 56 A.M. E.	
3 9 46 P.M.	20 7 49 P.M. E.	
11 0 21 A.M.		
18 2 57 A.M.		
25 5 33 A.M.		

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
48 Tauri	6	20 0 10 A.M.	Bright	7° N. &
		20 1 4 A.M.	Dark	79° N.
Chi Leonis	4	26 6 18 P.M.	Bright	58° N. &
		26 6 57 P.M.	Dark	13° S.
10 Virginis	6	27 11 9 P.M.	Dark	60° N. &
		27 11 46 P.M.	Bright	13° S.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee) from the Earth in each Lunation.

Last Quarter	4D.	1H. 18M.	A.M.
New Moon	12	6 29	A.M.
First Quaarter	19	8 12	P.M.
Full Moon	26	At Noon.	
Apogee	8	3	P.M.
Perigee	24	11	A.M.

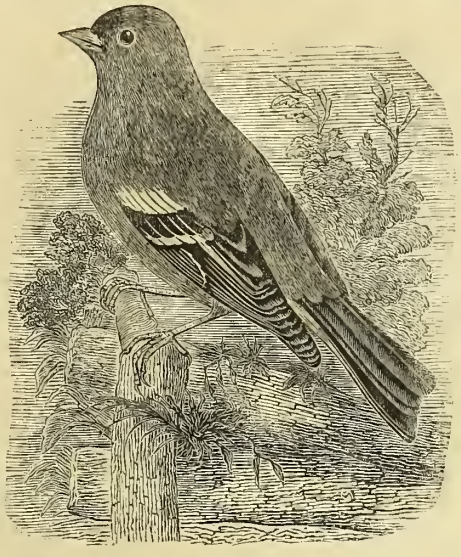
RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination South.	VENUS. Right Ascension	VENUS. Declination South.	MARS. Right Ascension	MARS. Declination North	JUPITER. Right Ascension	JUPITER. Declination North.	SATURN. Right Ascension	SATURN. Declination South.	URANUS. Right Ascension	URANUS. Declination North.	NEPTUNE. Right Ascension	NEPTUNE. Declination South
	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′
1	21h. 42m	11° 4′	20h. 31m	19° 54′	5h. 8m	26° 3′	11h. 33m	4° 26′	0h. 19m	0° 27′	1h. 25m	8° 21′	22h. 23m	10° 48′
6	21 24	11 33	20 57	18 24	5 11	26 2	11 32	4 36	0 21	0 15	1 26	8 24	22 24	10 44
11	21 1	13 11	21 22	16 41	5 15	26 1	11 30	4 49	0 22	0 2	1 26	8 28	22 24	10 41
16	20 46	14 53	21 47	14 46	5 20	26 1	11 28	5 2	0 24	North.	1 27	8 32	22 25	10 37
21	20 46	16 4	22 11	12 41	5 26	26 2	11 26	5 16	0 26	0 24	1 28	8 37	22 26	10 32
26	20 56	16 33	22 35	10 28	5 32	26 1	11 24	5 31	0 28	0 38	1 29	8 41	22 26	10 28

FEBRUARY.—SHRIMPING OFF THE BLIGH AT THE MOUTH OF THE THAMES.

NOTES ON NATURAL HISTORY.—FEBRUARY.

In February, if the season is mild, some few birds begin to build their nests, and others to hop about and chirp cheerfully, as if feeling a strong sense of enjoyment at the first glimpse of the return of warmth and summer. To those who feel interested in the study of nature, every season has its charm; but, perhaps, at no period of the year has nature so many attractions as when every object around seems first emerging from the sleep of winter In the depth of winter, when vegetation is quite torpid, the birds are silent; and even when they seem awakened to returning animation by the first breath of spring, their notes are weak, and their song is imperfect, the sounds being apparently uttered with difficulty; and, as the Rev. L. Jenyns observes, "to hear them labouring at a song, and only managing to get out part of it, conveys the idea of some physical impediment, which for awhile they appear unable to surmount." This is particularly observable in the chaffinch (*Fringilla cœlebs*), which generally utters its



CHAFFINCH.

first feeble notes about the first or second week of February, but which does not attain its full song till some weeks afterwards. When its song has attained its full perfection it is generally very regular, and consists of a definite number of notes. The chaffinch sings very early in the morning; and, indeed, in summer, Jenyns tells us, it begins at three o'clock. This bird is sometimes called the bachelor, probably from Linnæus having given it the specific name of *cœlebs*, which signifies a bachelor, because in Sweden and other northern countries the females migrate in the winter to a milder climate, leaving only the male birds behind; and these males must naturally have appeared to Linnæus so solitary that we cannot wonder he calls them bachelors. With us, however, as is observed in the "Journal of a Naturalist," the sexes do not separate at any season of the year, the flocks frequenting our barn-doors and homesteads in winter being composed of both males and females, which are easily distinguished from each other, the male bird being remarkable for the cleanliness and trimness of his plumage, which, without having any great variety or splendour of colouring, is so composed and arranged, and the white on his wings so brilliant, as to render him a very beautiful little creature. The female is as remarkable for the quiet, unobtrusive tintings of dress; and, when she lies crouching on her nest, elegantly formed of lichens from the bark of the apple tree and faded mosses, she would hardly be perceptible but for her little bright eyes that peep with suspicious vigilance from her covert." The same work informs us that in Gloucestershire these birds are generally called "twinks," from their constant repetition of one note resembling that word, when they are alarmed or in danger. The female chaffinch is very careful in building her nest, which is a very elegant one, curiously studded with lichens interwoven with wool, and lined with feathers and hair. She generally chooses the fork of a tree, or the centre of a mass of ivy, but in some cases she fixes her nest simply against the trunk of a tree, and in such a situation that it seems wonderful that the nest is not washed away by the first heavy storm that occurs. When the nest is closely examined it generally excites astonishment, from the neatness of its workmanship; for it is so firm and strong that it is difficult to pull it asunder. In summer the chaffinch lives principally upon insects, but in winter and very early spring it is apt to attack the seeds that are sown for the early vegetables, and also the first flowers of spring: sometimes the snowdrops, winter aconites, and the little red archangel will be found with the petals of their flowers lacerated as soon as they unfold; and sometimes the chaffinch may actually be seen tearing the flowers asunder to get at the pistil or incipient seed-vessel, which it finds at their base.

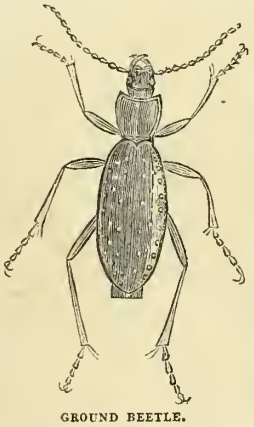
As the month advances, many birds are heard to sing, and among the earliest, after the robin-redbreast and the wren, which may be said to sing all winter, may be mentioned the hedge accentor, or hedge sparrow, the tom-tit, the skylark, the thrush, and the blackbird; and, in short, the melody of the woods may be said to have begun. "To me," says Mr. Waterton, in one of his charming essays, "to me, whom kind Providence has destined to spend the best part of my time in the open air, the song of birds is soothing beyond expression; and whilst I am admiring the beauty of the rising flowers around me, I know no greater addition to my gratification than that of listening to it. How enchanting is it to inspect the early snow-drops, those 'fair maids of February,' whilst the stormcock is pouring forth his newly-acquired notes from the top of a neighbouring elm! and how delightful it is to hear cock-robin's carol on the thorn that affords a shelter to the humble primrose!"

Sweet are the omens of approaching spring,
When gay the alder sprouts her winged leaves;
When tooting robins carol-welcomes sing,
And sparrows chelp glad tidings from the eaves.
What lovely prospects wait each wakening hour,
When each new day some novelty displays;
How sweet the sunbeam melts the crocus-flower,
Whose borrow'd pride shines dizen'd in his rays.
Sweet, new-hild hedges flush their tender green;
Sweet peep the arum-leaves their shelter screen;
Ah! sweet is all that I'm denied to share;
Want's painful hindrance holds me to her stall,
But still Hope's smiles unpoint the thorns of Care,
Since Heaven's eternal spring is free from all.—CLARE.

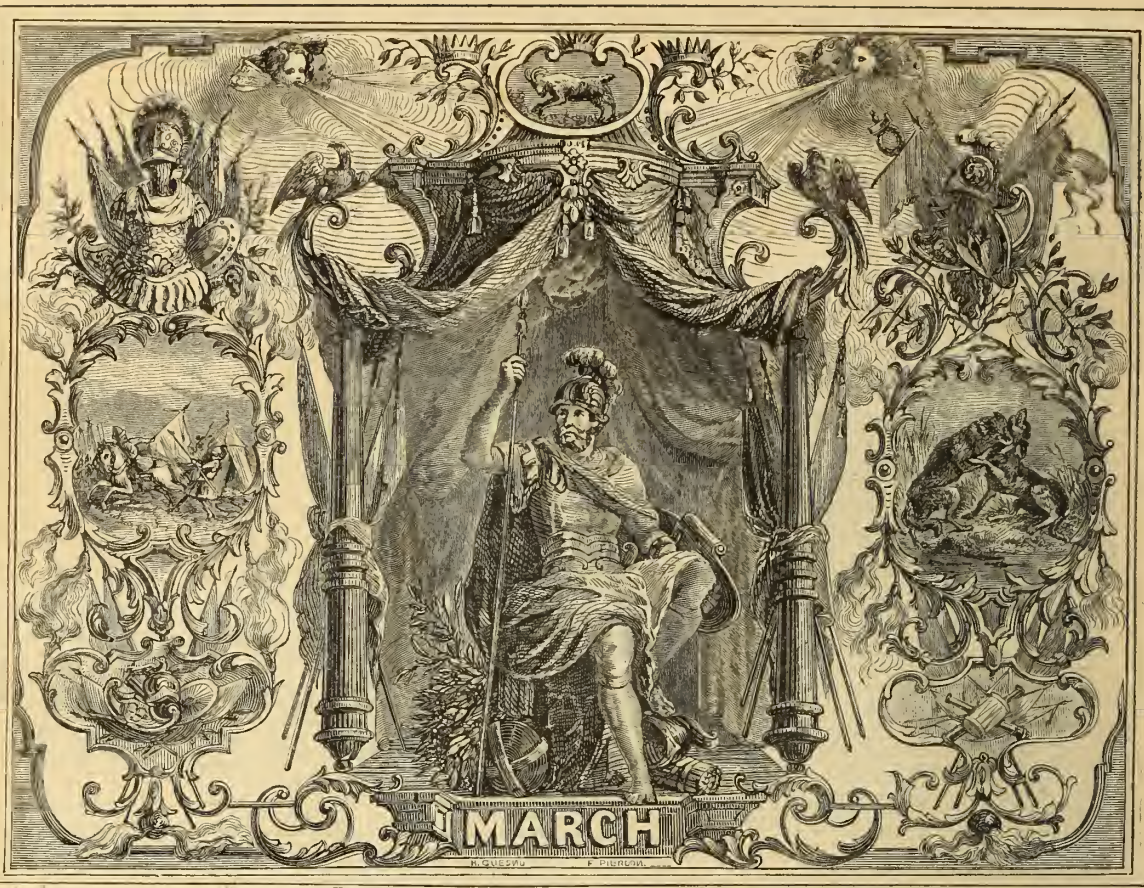
The flowers of early spring are, indeed, most highly prized, not only for their natural beauty, but because they come to us with all the charm of novelty, and as a promise of the further pleasures which are in store for us; and hence we seldom feel so much delight in viewing any of the most gorgeous flowers of summer as we do when we first perceive the graceful form of the snow-drop peeping through the ground, or the bright yellow of the winter aconite, succeeded by the richer yellow striped with brown, and the delicate white striped with pale lilac, of the cloth of gold and Scotch crocuses. These are followed by the primrose, with its pale yellow flowers peeping out from every bank, and the beautiful little white wood anemone, with the golden flowers of the buttercups, and the lesser celandine. But among these flowers, which have been so often mentioned, and whose beauties have been enlarged upon by every author who has written on the spring, there are others which have been passed by comparatively unnoticed, though almost equally common. In the depths of Epping Forest, particularly at High Beach, where the noble trees form avenues which look like the stately aisles of some magnificent Gothic cathedral, may be found a little British plant, which, when it first appears above the ground, which it does in the beginning of February, looks very much like asparagus. Its flowers open about the latter end of February or the beginning of March; and, strange to say, they grow from the centre of the leaves, and are succeeded by bright red berries, which also grow from the middle of the leaves, and which have a most singular appearance, as they seem as if they had dropped there by accident, so unnatural does it appear that they should grow in such a position. This plant is called butcher's broom (*Ruscus aculeatus*), because butchers used formerly to hang bunches of it over their meat to keep away the flies; as, from the hardness of the leaves and their sharp points, which are as prickly as those of the holly, they wound the large flies, which are most injurious to meat, whenever they approach them. In Germany, the plant is called mouse-thorn, because it is used in cupboards and pantries to put over cold meat, butter, and other articles of food, which are occasionally attacked by mice, to keep these little animals away; as, when they have once pricked their noses with the sharp points of the butcher's broom, they never venture near the place again. The botanic name of the plant (*Ruscus*) is derived from two Celtic words, signifying box holly.

BUTCHER'S BROOM.

The warmth of February is seldom sufficient to hatch the eggs of the moths and butterflies, except in some instances where the eggs have been deposited in situations fully exposed to the sun. The water beetles, at the beginning of winter, generally retire to the mud at the bottom of the ponds, where they remain till the frost is all gone. The ground beetles (*Carabus*), on the contrary, generally adhere by their claws to the underside of a stone, which serves for their winter retreat, their backs being next the ground: a strange posture, which, however, is no doubt dictated to them by instinct for some admirable purpose which we do not yet clearly understand, but which, perhaps, may be, as Messrs. Kirby and Spence seem to suppose, intended to defend them from the wet. Sometimes a number of these beetles are found crowded together as if to keep each other warm. In all cases, the ground beetles appear to winter in a perfect state, and in places whence they can easily emerge whenever a few fine days incline them to do so. Thus, they are frequently seen in February, or, in fact, whenever a few warm days have given the first indications of spring. The ground beetles are so called because they are very seldom seen except on the ground. Most of the species, indeed, are incapable of flying, as they have only the rudiments of wings; and those that have wings very rarely make use of them, as they are generally too short and too weak for the purposes of flight. The insects are, however, very active, running away with the greatest quickness when alarmed, and hiding themselves in the ground and under stones. They generally shun the light, coming abroad only in the evening, and then preying voraciously upon other insects, or, when these are not to be procured, on their own species. Whenever one of the ground beetles is injured in any way, or appears feeble or ill, the others are sure to attack him and devour him. When taken in the hand, they eject a drop of very acrid liquor, which has a very strong disagreeable smell, and which burns the hand like caustic, leaving a black or brownish stain which it is very difficult to efface. The grubs of these insects are found generally in rotten wood, and they differ from many other kinds of grubs in having six scaly feet, and remarkably strong jaws, with which they seize any caterpillars that are so unfortunate as to fall in their way. Réaumur, a French naturalist, has given us an account of the voracity of one of these grubs that is perfectly terrific. He says, that with its scaly pincers it will attack a caterpillar, and burying its head in the body, "notwithstanding the writhing of the sufferer, will persevere till the whole is devoured. The largest caterpillar is hardly sufficient for one day's nourishment; and it will eat several in the same day, when they are to be found." These grubs are so gluttonous that when they have an opportunity, they eat so much that the skin appears ready to crack. This inordinate appetite, however, does not always go unpunished; for sometimes when the largest of the grubs are unable to move from repletion, they are attacked by the young and active of their own species, and devoured. After giving such an instance of their barbarity, it is but fair to add, that they are highly respected in France for the good they do in destroying the grub of the cockchafer, a most destructive insect; which, in France particularly, is considered to destroy more plants than nearly all the other insects put together.



GROUND BEETLE.



M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Morning.	MOON. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 7h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	F	*St. David*	6 48	12 37	31	5 37	9 33	2 25	36½	8 16		17		4 0	4 20	60
2	S	*St. Chad*	6 46	12 25	31¼	5 39	10 43	3 14	32	8 45		18		4 40	5 0	61
3	S	3RD S. in LENT	6 44	12 12	31¾	5 41	11 51	4 2	28	9 11		19		5 15	5 35	62
4	M	Length of day 11h 1m	6 42	11 59	32	5 43	Morning.	4 49	24½	9 40		20		5 55	6 15	63
5	Tu	Day breaks 4h 45m	6 40	11 45	32½	5 45	0 54	5 36	22	10 12		☾		6 35	6 55	64
6	W	Twilight ends 7h 40m	6 38	11 31	32¾	5 46	1 55	6 24	20	10 50		22		7 15	7 45	65
7	Th	*Perpetua*	6 36	11 17	33¼	5 48	2 50	7 12	19¼	11 33		23		8 10	8 50	66
8	F	*O. S. Matthias*	6 34	11 2	33¾	5 50	3 39	7 59	19¼	Afternoon		24		9 30	10 15	67
9	S	Rigel souths 6h 0m P.M.	6 31	10 47	34	5 51	4 22	8 47	20	1 15		25		10 55	11 35	68
10	S	4TH S. in LENT.	6 28	10 31	34½	5 53	5 0	9 34	21¾	2 14		26		No Tide.	0 10	69
11	M	Beta Tauri souths 6h 2m P.M.	6 26	10 15	34¾	5 55	5 31	10 21	24¼	3 18		27		0 38	1 0	70
12	Tu	*St. Gregory*	6 23	9 59	35¼	5 57	6 0	11 7	27½	4 22		28		1 20	1 40	71
13	W	Alpha Orionis souths 6h 23m P.M.	6 21	9 43	35½	5 58	6 27	11 53	31½	5 29		○		2 0	2 20	72
14	Th	Day increased 3h 57m	6 18	9 26	36	6 0	6 50	Afternoon	35½	6 39		1		2 35	2 50	73
15	F	Length of night 12h 14m	6 16	9 9	36½	6 2	7 13	1 25	39¾	7 49		2		3 10	3 25	74
16	S	Sirius souths 7h 3m P.M.	6 13	8 52	36¾	6 4	7 38	2 13	44¼	9 0		3		3 40	3 55	75
17	S	5TH S. in LENT	6 11	8 35	37	6 6	8 5	3 2	48¾	11 4		4		4 15	4 30	76
18	M	[*St. Patrick*	6 9	8 17	37½	6 8	8 34	3 54	52½	11 27		5		4 50	5 5	77
19	Tu	Castor souths at 7h 37m P.M.	6 7	7 59	38	6 10	9 8	4 48	55½	Morning.		6		5 25	5 45	78
20	W	Spring commen.	6 5	7 41	38¼	6 11	9 50	5 44	57¼	0 37		7		6 5	6 30	79
21	Th	*Benedict*	6 3	7 23	38¾	6 12	10 41	6 42	58	1 43		☽		6 50	7 20	80
22	F	Camb. Term ends	6 1	7 5	39¼	6 14	11 41	7 41	57½	2 44		9		7 55	8 35	81
23	S	Ox. Term ends	5 59	6 46	39½	6 15	Afternoon	8 39	55½	3 35		10		9 20	10 5	82
24	S	PALM SUNDAY	5 57	6 28	39¾	6 17	2 3	9 35	52¼	4 19		11		10 50	11 35	83
25	M	*Annun. Lady D.*	5 54	6 9	40¼	6 18	3 20	10 30	48¼	4 54		12		No Tide.	0 10	84
26	Tu	P. Geo. Will. b.	5 52	5 51	40¾	6 20	4 37	11 22	43¾	5 26		13		0 40	1 6	85
27	W	Procyon souths 7h 12m P.M.	5 50	5 32	41	6 22	5 54	Morning.	—	5 54		●		1 30	1 55	86
28	Th	Maundy Thurs.	5 48	5 13	41½	6 24	7 9	0 13	38¾	6 19		15		2 15	2 40	87
29	F	GOOD FRIDAY	5 45	5 55	41¾	6 26	8 23	1 2	34¼	6 43		16		2 55	3 15	88
30	S	Pollux souths 7h 5m P.M.	5 43	4 36	42¼	6 28	9 33	1 51	29¾	7 11		17		3 35	3 55	89
31	S	EASTER SUNDAY	5 41	4 18	42½	6 30	10 39	2 39	26	7 38		18		4 13	4 30	90

MARCH.

The Sun is situated south of the Equator till the 20th, and north of the Equator from the 21st. He is in the sign Pisces till the 20th, having been in that sign 29 days, 23 hours, and 58 minutes. On the 20th, at 11h. 3m. P.M., he enters the sign Aries (the Ram), and Spring commences. He rises on the 3d at the E. by S., and on the 23d at the E.; he sets on the same day at the W. by S., and at the W. points of the horizon. On the first day he is 94,190,000 miles distant from the Earth. His times of southing, in common clock time, and his height above the horizon expressed in degrees at the same time, are shown on the Calendar pages in every month.

The Moon is in Virgo on the 1st and 2d; in Libra on the 3d and 4th; in Ophiuchus on the 5th and 6th; in Sagittarius on the 7th and 8th; in Capricornus on the 9th and 10th; in Aquarius on the 11th and 12th; in Pisces on the 13th; moving on the boundaries of Pisces and Cetus on the 15th and 16th, and on those of Cetus and Aries on the 17th; in Taurus on the 18th and 19th; crossing the Milky Way during the evening hours of the 20th, being in part of Orion; in Gemini on the 21st and 22d; in Cancer on the 23d and 24th; in Leo on the 25th and 26th; in Virgo from the 27th to the 30th; and then in Libra till the end of the month.

She is above the horizon when the Sun is below, during the morning hours at the beginning and at the end of the month; and during the evening hours from the 15th to the 26th.

She is south of the Equator from the 1st to the 15th. Her greatest south declination is on the 7th; she is on the Equator on the 15th; is at her extreme north declination on the 21st, and again on the Equator on the 28th, and going south.

She is near Mercury on the 11th; Venus on the 14th; Saturn on the 15th; Uranus on the 16th; Mars on the 21st; Jupiter on the 26th; and Saturn on the 31st.

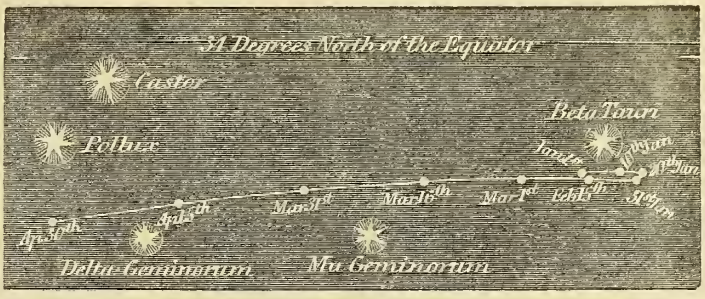
Mercury is in the constellation Aquarius till the 6th; in Capricornus from the 7th to the 10th; in Aquarius again from the 11th to the 25th; and in Pisces from the 26th.

He is a morning star all the month, and rises on the 1st at 5h. 52m., on the 10th at 5h. 47m., on the 20th at 5h. 39m., and on the last day at 5h. 27m.; these times being 56m., 41m, 26m., and 14m. before the times of sunrise respectively. He is not very favourably situated for observation. On the 14th, he rises near the E.S.E.; and towards the end of the month, near the E. by S. points of the horizon. He is at his greatest W. elongation on the 5th; and is near the Moon on the 11th. He moves eastward among the stars during the month. (See the diagram in last month, exhibiting his path in the heavens.)

Venus is in the constellation Aquarius till the 4th, and in that of Pisces from the 5th. She is an evening star towards the end of the month, and sets on the 15th at 6h. 14m. P.M., and on the 31st at 7h. 6m. P.M., at the W. point of the horizon. She moves eastward among the stars; is in superior conjunction with the Sun on the 3rd; is near the Moon on the 14th, and Saturn on the 25th. She is not yet favourably situated for observation. The annexed diagram shews her path among the stars, and her relative position to them at different times. Her telescopic appearance is that of a complete circle, of the same dimensions as in January.

Mars is in the constellation Taurus till the 9th, on which day he enters Gemini. He is crossing the Milky Way till the 20th, on which day he is at its W. boundary. He is an evening star, and sets on the 1st at 3h. 41m. A.M.; on the 15th at 3h. 2m. A.M.; and on the last day at 2h. 31m. A.M., midway between the N.W. by W. and the N.W. points of the horizon. He moves eastward among the stars, and is near the Moon on the 21st. His altitude above the horizon when he souths on the 1st is 64°½, and on the last day 64°. The annexed diagram shews his path among the stars.

PATH OF MARS FROM JANUARY 1 TO APRIL 30, 1850.

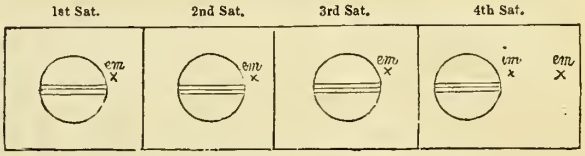


Scale, 12 degrees to one inch

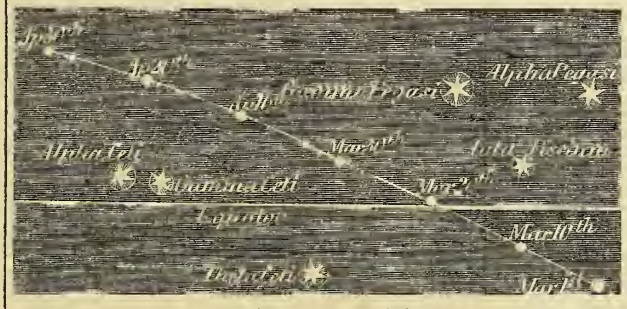
Jupiter is in the constellation Leo throughout the month; he rises before the Sun sets. He sets after the Sun rises till the 18th, at the time of sunrise on the 19th, and before the Sun rises after this day, at the W. by N. point of the horizon. He rises on the 1st at 6h. 11m. P.M., and on the last day at 3h. 53m. P.M. He souths at an altitude of 44°¼ on the 1st, and of 45°⅔ on the last day. He moves slowly westward among the stars, and is near the Moon on the 26th. His motion among the stars during this month is shewn in the diagram in May.

Jupiter's Satellites.—The Immersions of the 1st, 2d, and 3d, and an Emersion of the 2d and another of the 4th are visible. The relative position of the Satellites to Jupiter at the instant of the eclipse is shewn in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



PATH OF VENUS FROM MARCH 1 TO APRIL 30, 1850.



Scale, 24 degrees to one inch.

Saturn is in the constellation Cetus throughout the month; he is visible for a short time after sunset till towards the end of the month, and sets at a point a little N. of W., at 8h. 3m. on the 1st; at 7h. 16m. P.M on the 15th; and with the Sun on the 30th. He souths at an altitude of 40° nearly. He is near the Moon on the 15th; Venus on the 25th; and is in conjunction with the Sun on the 31st. For his path in the heavens, see the diagram in September.

Uranus is in the constellation Pisces throughout the month; he sets midway between the W. by N. and W.N.W. points of the horizon, on the 1st at 9h. 42m. P.M., and on the last day at 7h. 52m. P.M. He is moving slowly eastward among the stars, and is near the Moon on the 16th.

Neptune rises on the 1st at 6h. 38m. A.M.; on the 15th at 5h. 44m. A.M.; and on the last day at 4h. 42m. A.M.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN

Days of the Month.	Mercury. Morning.	Venus. Afternoon	Mars. Afternoon	Jupiter. Morning.	Saturn. Afternoon	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 29	0 13	7 0	0 49	1 54	11 52
6	10 28	0 17	6 49	0 27	1 36	11 33
11	10 32	0 20	6 37	0 5	1 19	11 14
16	10 38	0 23	6 26	Aftern.	1 1	10 55
21	10 46	0 26	6 16	11 16	0 44	10 36
26	10 56	0 29	6 6	10 54	0 27	10 17
31	11 7	0 32	5 57	10 33	0 9	9 58

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Emersion.	Eclipses of 2nd. Sat. Im. I. Emer. E.
n. H. M.	n. H. M.
15 4 46 A.M.	7 9 28 P.M. I.
16 11 13 P.M.	15 2 51 A.M. E.
24 1 7 A.M.	3rd Sat.
25 7 36 P.M.	23 9 57 P.M. E.
31 3 1 A.M.	31 1 55 A.M. E.
	4th Sat.
	26 4 11 A.M. I.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star. D. H. M.	At which limb of the Moon.	Between what Latitudes visible.
Xi 1 Libræ	6	3 5 10 A.M.	Dark	2° N. &
		3 5 37 A.M.	Bright	77° N.
3 Cancri	6	23 1 2 A.M.	Bright	29° N. &
		23 1 54 A.M.	Dark	90° N.
Omicron 1 Cancri		23 11 30 P.M.	Bright	14° N. &
		24 0 34 A.M.	Dark	90° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Last Quarter	5D.	8H.	5M.	P.M.
New Moon ..	13	11	17	P.M.
First Quarter	21	3	58	A.M.
Full Moon ..	27	11	26	P.M.
Apogee	8	8		A.M.
Perigee	24	3		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	21h. 4m	16° 32′	22h. 49m	9° 4′	5h. 37m	26° 1′	11h. 22m	5° 41′	0h. 30m	0° 47′	1h. 29m	8° 44′	22h. 27m	10° 27′
6	21 24	15 58	23 12	6 41	5 45	26 0	11 20	5 56	0 32	1 1	1 30	8 50	22 28	10 23
11	21 47	14 47	23 35	4 12	5 53	25 58	11 18	6 12	0 34	1 16	1 31	8 55	22 29	10 19
16	22 13	13 2	23 58	1 41	6 2	25 54	11 15	6 27	0 36	1 30	1 32	9 1	22 29	10 15
21	22 41	10 44	0 20	North.	6 11	25 47	11 13	6 42	0 39	1 45	1 33	9 7	22 30	10 11
26	23 10	7 55	0 44	3 24	6 21	25 39	11 11	6 56	0 40	2 0	1 34	9 13	22 30	10 7

A MARCH DAY.

NOTES ON NATURAL HISTORY.—MARCH.

The weather in March is generally more capricious than at any other season of the year; as in this month spring and winter appear contending for the victory, and cold winds, accompanied perhaps by frost and snow, are followed by gleams of sunshine, and sometimes by days as hot as those in the middle of summer. Violent storms are also frequent at this season, particularly about the vernal equinox, and for a week or two before and after that season. The storms in England, however, are but trivial compared with those of America; and one which occurred in that country just at the breaking up of winter is so remarkable, that an account of it was published some years ago by Mr. Richard Taylor, of which the following is an abridgement. This *ice-storm* occurred in the year 1832, at Philipsburg, in Pennsylvania. The winter had been remarkably severe, but at the earliest commencement of spring a thaw took place, and in the open clearings all traces of snow suddenly disappeared; the birds began to sing, and the mosquitoes came out of their hiding-places and danced in clusters in the sunshine. At night a heavy rain set in, which descended in torrents, and was accompanied by such a piercing wind that it froze as soon as it touched the trees and the ground, so as to envelope every object in a thick coating of transparent ice. In the morning the scene surpassed all description: the ground looked like an enormous lake frozen quite hard; and the trees all seemed as though they had been formed of glass. The heavy foliage of the hemlock and spruce firs was literally incased in solid masses of ice, and the smallest twig or blade of grass, being surrounded by ice more than an inch thick, resembled the vegetable substances which sometimes occur in masses of crystal. While all was still, the scene was one of glittering magnificence; but when a wind arose it became terrific. The tall trees drooped and swung heavily, weighed down by the masses of solid crystal which the branches had to support, and as these struck against each other, they shivered and sent down avalanches of ice. On the succeeding morning, the limbs of the trees began to give way under such an unusual load. Every where around was seen and heard the crashing of the topmost branches, which fell to the earth with a noise like the breaking of glass, yet so loud as to make the woods resound. As the day advanced, instead of branches, whole trees began to fall; and, during twenty-four hours, the scene which took place was as sublime as can well be conceived. There was no wind perceptible, yet, notwithstanding the calmness of the day, the whole forest seemed in motion—falling, wasting, or crumbling, as it were, piecemeal. Crash succeeded to crash, until at length these became so rapidly continuous as to resemble the incessant discharges of artillery; gradually increasing, as if at first from the irregular firing at intervals of the outposts, to the uninterrupted roar of a heavy cannonade. Pines of one hundred and fifty and one hundred and eighty feet in height came thundering to the ground, carrying others before them. Groves of hemlocks were bent to the ground like reeds; and the spreading oaks and towering sugar maples were uprooted like stubble, and often without giving a moment's warning. Under every tree was a rapidly accumulating *débris* of displaced limbs and branches; their weight increased more than tenfold by the ice, and crushing every thing in their fall with sudden and terrific violence. Altogether, this spectacle was one of indescribable grandeur. The roar, the cracking and rending, the thundering fall of the uprooted trees, the startling unusual sounds and sights produced by the descent of such masses of solid ice, and the suddenness of the crash when a neighbouring tree gave way, all together presented a scene not easily forgotten. Yet all this was going on in a dead calm, except at intervals a gentle breeze from the south-east slightly waved the topmost pines. Had the wind freshened, the destruction would have been still more appalling. It was awful to witness the sudden prostration of oaks of the largest class. These trees were the greatest sufferers; and it seemed remarkable that the deciduous trees should be less able to bear the additional burthen than the heavily laden evergreens. The branches of the oaks rapidly gave way, while the thickly encased foliage of the hemlock spruce fir hung drooping around the stems, upon their long pliant branches, until they appeared like a solid mass, or monumental pillar of ice. The weight of the trees was so prodigiously increased by the load of ice they had to sustain, that a branch of hemlock spruce which weighed twenty pounds when covered with ice, weighed only one pound when the ice was melted. The scene of desolation which presented itself after this "ice-storm," Mr. Taylor describes as being most extraordinary. Within the limits of fifteen acres of forest fifty of the largest trees were overthrown, besides an immense number that had their branches broken. Roads were completely stopped up by the falling timber. Waggons, sleds, and sleighs were necessarily abandoned, and the horses, in some instances, with difficulty saved. In the course of a few days, however, a thaw, accompanied by heavy rain, completely cleared the drooping forest of the remains of its unwonted covering.

WINTER GREEN.

As many birds build their nests in February, of course young birds are abundant in the month of March; and as, when the weather happens not to be particularly warm, there are not so many caterpillars as in summer, the parent birds are frequently obliged to go to a considerable distance to obtain food for their young; and, as the young birds are thus left comparatively unprotected, they frequently fall victims to some of the many enemies by which they are surrounded. The parent birds, also, from the intentness with which they pursue their occupation, frequently run into dangers which, under other circumstances, they would have avoided, and are pounced upon by the sparrow-hawks and other birds of prey, which seem instinctively to know that it is a favourable moment for their attacks. In some cases the unfortunate birds appear to see their danger, but to be unable to avoid it; and in the "Journal of a Naturalist" a fact is related which seems to prove that the powers of some of the smaller birds are completely subdued by the presence of an enemy:—"A beautiful male bullfinch," says Mr. Knapp, "that sat pecking the buds of a blackthorn by my side, when I was overlooking the work of a labourer, suddenly uttered the instinctive moan of danger, but made no attempt to escape into the bush, seemingly deprived of the power of exertion. On looking round, a sparrow-hawk was observed on motionless wing, gliding rapidly along the hedge, and, passing me, rushed on its prey with undeviating certainty."

The Winter Green (*Pyròla*) is an elegant little plant, which grows wild in the north of England and in Scotland, but which it is very difficult to cultivate. One species is occasionally found in gardens, but that which has cut leaves is quite a wild denizen of the woods, which resists every attempt at cultivation. The flower is very pretty, as it is white with a yellow centre, and the petals have a solid wax-like appearance, somewhat like those of the camellia.

In March, the meadows in some situations are gay with daffodils, the wild flowers of which are, perhaps, even more splendid than the cultivated varieties, though they are much less durable. Shakespeare speaks of the daffodil in the beautiful lines on the flowers of spring, in "The Winter's Tale:"—

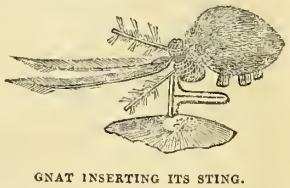
> Daffodils,
> That come before the swallow dares, and take
> The winds of March with beauty; Violets dim,
> But sweeter than the lids of Juno's eyes,
> Or Cytherea's breath; pale Primroses,
> That die unmarried, ere they can behold
> Bright Phœbus in his strength; bold Oxlips, and
> The Crown Imperial.

Herrick has also addressed the following lines to the daffodil:—

> Fair daffodils, we weep to see
> You haste away so soon;
> As yet the early rising sun
> Has not attained his noon.
> Stay, stay,
> Until the hastening day
> Has run
> But to the evening song;
> And, having pray'd together, we
> Will go with you along!
>
> We have short time to stay, as you;
> We have as short a spring,
> As quick a growth to meet decay,
> As you, or anything:
> We die
> As your hours do; and dry
> Away,
> Like to the summer's rain,
> Or as the pearls of morning dew,
> Ne'er to be found again.

In the gardens are now abundance of crocuses of various kinds; mezereons, pink and white; the spurge laurel, one kind of which (*Dáphne póntica*) has fragrant flowers; and abundance of violets. The trees are beginning to come into leaf, particularly the willow, the laburnum, and the lilac; and the horse-chestnut begins to open its buds, the large scales enclosing which crack and fall off in such quantities that they may be gathered up with the hand from under the trees. The buds of the elm also throw off their scales when the leaves first open in spring. Among the other trees which come early into leaf may be mentioned the aspen and the white poplar.

The alternations of bright sunshine and rain which are common in March are extremely favourable to the appearance of gnats and other similar insects. The first of these that appear are what are called the winter midges (*Trichocèra hyemàlis*). "These delicate little creatures may often be seen throughout the winter and early spring months assembled in troops, alternately rising and falling with rapid revolutions, in some sunny nook, even though the ground may at the time be covered with snow." As the spring advances, these midges are succeeded by others of a different species; and as the weather becomes warmer the true gnats appear. The sting of the gnat (*Culex pipiens*) is well known; though gnats themselves are generally so rapid in their movements, and so much dreaded whenever they appear, that very few people are aware of the delicacy and elegance of their forms. Even the sting is very curiously formed. The sucker which pierces the skin is enclosed in a sheath, which folds up as the sucker enters into the flesh: the sucker of the gnat has six lancets, and it thus inflicts a severe though minute wound, the pain of which is increased by an acrid liquor injected into it. When a gnat is examined under a microscope, it will be found beautifully and delicately formed; and those who will take the trouble to watch the operations of the female, when she is about to make her nest, will be very much struck with the ingenuity and admirable instinct which this little creature displays. The eggs of the gnat are pointed at the upper end and much broader below, and they are so heavy that if laid singly in the water they would sink to the bottom. The difficulty, therefore, is to contrive some mode of keeping them floating; and this the gnat performs by making her eggs into a kind of boat-shaped raft. To perform this the mother gnat fixes herself by her fore-legs to a floating leaf, branch, or anything else that may be in the water, with her body resting on the surface, except the last ring of her tail, which is a little raised; "she then crosses her two hind legs in the form of the letter X, the inner opening of which is intended to form the scaffolding of her structure. She accordingly brings the inner angle of her crossed legs close to the raised part of her body and places in it an egg, covered, as is usual among insects, with a glutinous fluid. On each side of this egg she places another, all which adhere firmly together, by means of their glue, and form a triangular figure, which is the stern of the raft. She proceeds in the same manner to add egg after egg in a vertical (not a horizontal) position, carefully regulating the shape by her crossed legs; and, as her raft increases in magnitude, she pushes the whole gradually to a greater distance; and when she has about half finished she uncrosses her legs and places them parallel, the angle being no longer necessary for shaping the boat. Each raft consists of from two hundred and fifty to three hundred and fifty eggs, which, when all laid, float on the water secure from sinking, and are finally abandoned by the mother. They are hatched in a few days, the grubs issuing from the lower end; but the boat, now composed of the empty shells, continues to float till it is destroyed by the weather.



GNAT INSERTING ITS STING.

FEMALE GNAT DEPOSITING HER EGGS.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises	SUN. Souths. After 12 o'Clock	SUN. Height above horizon	SUN. Sets	MOON. Rises Afternoon	MOON. Souths. Morning	MOON. Height above horizon	MOON. Sets Morning	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 3h. 4h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset O'Clock. 8h. 9h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	M	Easter Monday	5 38	3 59	43	6 31	11 43	3 27	22¾	8 8		19		4 50	5 5	91
2	Tu	Easter Tuesday	5 36	3 41	43½	6 33	Morning.	4 16	20½	8 45		20		5 25	5 40	92
3	W	Rich. Bp. Chich.	5 34	3 23	43⅝	6 35	0 41	5 4	19¼	9 25		21		6 0	6 20	93
4	Th	*St. Ambrose*	5 32	3 5	44¼	6 37	1 33	5 52	18¼	10 11		☾		6 40	7 5	94
5	F	Sirius souths 5h 44m P.M.	5 29	2 47	44½	6 38	2 19	6 40	19⅜	11 4		23		7 30	8 0	95
6	S	Old Lady Day	5 27	2 30	45	6 40	2 58	7 27	20¾	Afternoon		24		8 45	9 25	96
7	S	Low Sunday	5 24	2 12	45¼	6 41	3 31	8 14	23	1 2		25		10 10	10 45	97
8	M	Fire Insur. due	5 22	1 55	45⅝	6 43	4 2	9 0	26	2 7		26		11 25	At Midnight.	98
9	Tu	Castor souths 6h 15m P.M.	5 20	1 39	46	6 44	4 27	9 46	29¾	3 14		27		No Tide.	0 25	99
10	W	Ox. & C. T. beg.	5 18	1 22	46½	6 45	4 52	10 32	33¾	4 23		28		0 50	1 10	100
11	Th	Length of day 13h 31m	5 15	1 6	46¾	6 46	5 15	11 18	38¼	5 33		29		1 30	1 45	101
12	F	Day breaks 3h 8m	5 13	0 50	47¼	6 48	5 40	Afternoon	43	6 45		○		2 0	2 20	102
13	S	Twilight ends 8h 57m	5 11	0 34	47½	6 50	6 6	0 56	47½	8 0		1		2 40	2 55	103
14	S	2nd S. aft. Easter.	5 9	0 18	47¾	6 52	6 34	1 48	51½	9 15		2		3 10	3 30	104
15	M	Easter Term beg.	5 7	0 3	48¼	6 53	7 7	2 42	54¾	10 29		3		3 50	4 5	105
16	Tu	Procyon souths 5h 53m P.M.	5 5	Before 12 o'clock	48½	6 55	7 47	3 39	57	11 38		4		4 25	4 45	106
17	W	Length of night 10h 5m	5 2	0 26	49	6 57	8 35	4 37	58¼	Morning.		5		5 5	5 30	107
18	Th	Pollux souths 5h 50m P.M.	5 0	0 40	49¼	6 59	9 33	5 36	58	0 40		6		5 50	6 15	108
19	F	*Alphage*	4 58	0 54	49¾	7 0	10 39	6 34	56½	1 34		○		6 45	7 15	109
20	S	Alpha Hydræ souths 7h 26m P.M.	4 56	1 7	50	7 2	11 51	7 30	53½	2 19		8		7 50	8 30	110
21	S	3rd S. aft. Easter.	4 55	1 20	50¼	7 4	Afternoon	8 23	49¾	2 57		9		9 15	9 55	111
22	M	Regulus souths 7h 58m P.M.	4 53	1 32	50¾	7 6	2 21	9 15	45½	3 27		10		10 40	11 20	112
23	Tu	*St. George*	4 51	1 44	51	7 8	3 37	10 5	40¾	3 54		11		11 50	No Tide.	113
24	W	Beta Leonis souths 9h 31m P.M.	4 49	1 56	51¼	7 10	4 51	10 54	36¼	4 21		12		0 20	0 45	114
25	Th	*St. Mark Evan.*	4 47	2 7	51¾	7 11	6 3	11 42	31½	4 46		13		1 10	1 35	115
26	F	[Princess Alice M. born, 1843.	4 45	2 18	52	7 13	7 14	Morning.	—	5 10		●		1 55	2 10	116
27	S	Spica Virginis souths 10h 56m P.M.	4 43	2 28	52¼	7 14	8 23	0 30	27½	5 36		15		2 35	2 50	117
28	S	4th S. aft. Easter.	4 41	2 37	52⅝	7 16	9 29	1 18	24	6 6		16		3 10	3 30	118
29	M	Arcturus souths 11h 38m P.M.	4 39	2 47	53	7 17	10 31	2 7	21¼	6 40		17		3 45	4 0	119
30	Tu	Regulus souths 7h 27m P.M.	4 37	2 55	53¼	7 19	11 25	2 56	19½	7 18		18		4 20	4 40	120

APRIL.

The Sun is situated north of the Equator, and on the 20th, at 11h. 16m. A.M., passes from the sign Aries to that of Taurus (the Bull), having been in the former sign 30 days, 12 hours, and 13 minutes. He rises on the 8th, at E. by N. ; and on the 28th, at E.N.E. He sets on the same days near W. by N. and W.N.W. On the 1st he is 95,003,000 miles distant from the Earth.

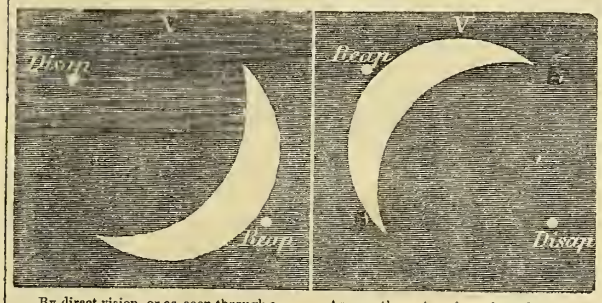
The Moon is in Ophiuchus on the 1st and 2nd ; in Sagittarius from the 3d to the 5th; in Capricornus on the 6th and 7th ; in Aquarius on the 8th and 9th ; in Cetus, and moving near the boundaries of Cetus, Pisces, and Aries, from the 9th to part of the 14th ; in Taurus on the latter part of the 14th to the 16th ; in part of Orion, and crossing the Milky Way, during the early hours of the 17th ; in Gemini on the 18th and 19th ; in Cancer on the 19th and 20th ; in Leo on the 21st and 22nd ; in Virgo from the 23rd to the 26th ; in Libra on the 27th and 28th ; in Ophiuchus on the 29th ; and in Sagittarius, on the evening of the last day.

She is above the horizon when the Sun is below, during the morning hours, for some days at the beginning and at the end of the month ; and during the evening hours, from the 15th to the 27th.

She is at her extreme south declination on the 4th ; on the Equator on the 11th ; at her greatest north declination on the 19th ; a second time on the Equator, on the 24th ; and is south of the Equator till the end of the month.

She is near Mercury and Saturn on the 11th; Uranus on the 12th; Venus on the 13th ; Mars on the 18th ; and Jupiter on the 22nd. Her times of rising, southing, and setting, together with her height expressed in degrees at the times of southing, are given on the calendar pages for every day in the year. Her times of being full and new are given in every month at the foot of the second page of every month.

OCCULTATION OF ALDEBARAN BY THE MOON, ON APRIL 15, 1850.



By direct vision, or as seen through a telescope which does not invert.

As seen through an inverting telescope.

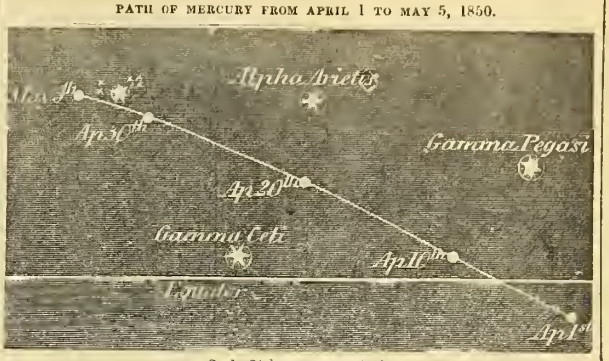
The star will disappear at the dark limb of the Moon, and will reappear at the bright limb ; the former will take place at 8h. 3m P.M., and the latter at 8h. 59m. P.M. The disappearance may be seen without the assistance of a telescope.

Mercury is in the constellation Pisces till the 4th; in Cetus from the 5th to the 11th ; in Pisces again from the 12th to the 16th ; in Aries from the 17th to the 29th ; and enters Taurus on April 30. He rises a few minutes before the Sun till the 16th, after which day the Sun rises before this planet. He sets before the Sun till the 18th ; on the 19th, he sets 9 minutes after the Sun ; on the 25th, he sets at 8h. 4m. ; and on the last day, at 8h. 45m. : which times are 53 minutes, and 1h. 26m. after sunset respectively. Therefore, he is favourably situated for observation during a few evenings at the end of this month. He sets on the 22nd near W.N.W., and on the last day near N.W. by N. He moves eastward among the stars throughout the month ; and is near Saturn on the 10th, the Moon on the 11th, Uranus on the 17th, and is in superior conjunction with the Sun on the 18th. His path among the stars, and his relative position to them is shown in the annexed diagram, which is a continuation of that inserted in February.

Venus is in the constellation Pisces till the 6th ; Aries from the 7th to the 26th ; and in Taurus from the 27th.

She is an evening star, and sets on the 1st, at 7h. 9m. P.M. ; on the 15th, at 7h. 54m. P.M. ; and on the last day at 8h. 44m. P.M. ; on the 2nd at the W. by N., and on the 17th at the W.N.W. points of the horizon. She is moving eastward among the stars throughout the month ; is near Uranus on the 7th, and the Moon on the 13th. (See the diagram in last month, exhibiting her path in the heavens, and relative position to the stars near her path.) Her telescopic appearance has almost remained unchanged since January.

PATH OF MERCURY FROM APRIL 1 TO MAY 5, 1850.



Scale, 24 degrees to one inch.

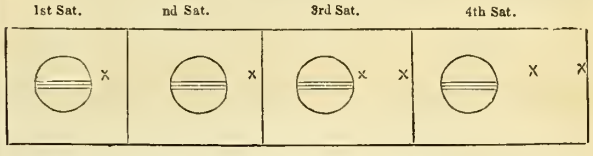
Mars is in the constellation Gemini throughout the month.

He is an evening star, and sets on the 1st, at 2h. 29m. A.M ; on the 15th, at 1h. 59m. A.M. ; and on the last day, at 1h. 23m. A.M., between the N.W. and the N.W. by N. points of the horizon. He moves eastward among the stars, and is near the Moon on the 18th : his altitude above the horizon, when he souths on the 1st, is 64° ; and on the last day, is 62°. (See the diagram in last month, showing his path among the stars.)

Jupiter is in the constellation Leo throughout the month. He sets on the 1st at 5h. 13m. A.M. ; and on the last day at 3h. 15m. A.M., at the W. by N. point of the horizon. He souths at an altitude of 45°¾ on the 1st, and of 41°½ on the last day. He moves slowly westward among the stars, and is near the Moon on the 22nd. (See the diagram in next month for his position with respect to neighbouring stars.)

Jupiter's Satellites.—A few emersions of the first and second, and an immersion and emersion of the fourth, are visible. The relative position of the satellite to Jupiter at the instant of the eclipse is shown in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Cetus throughout the month. At the beginning of the month he rises, souths, and sets at the same time nearly as the Sun, and he is unfavourably situated for observation. He souths at an altitude of 41° nearly; he is near Mercury on the 10th, and the Moon on the 11th.

Uranus is in the constellation Pisces throughout the month. He is not favourably situated for observation.

Neptune rises on the 1st, at 4h. 38m. A.M. ; on the 15th, at 3h. 42m. A.M. ; and on the last day, at 2h. 46m. A.M., midway between the E. by S. and the E.S.E. points of the horizon.

ON THE APPARENT MOTIONS OF THE SUN, MOON, AND PLANETS.

From the monthly account of the motions of the celestial bodies, it will be remarked that the Sun, the Moon, and the planets are incessantly shifting their places. The stars, on the contrary, as has already been remarked in previous years, maintain the same relative positions, and thus act admirably as points of reference to indicate the positions and changes of position of the other heavenly bodies.

The apparent path of the Sun is from west to east; and, in his motion, he seems

(*Continued on page* 29.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Afternoon	Mars. Afternoon	Jupiter. Afternoon	Saturn. Afternoon	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 9	0 33	5 55	10 28	0 6	9 55
6	11 22	0 36	5 45	10 7	Morning	9 37
11	11 37	0 40	5 36	9 46	11 31	9 16
16	11 55	0 44	5 28	9 24	11 14	8 57
21	Aftern.	0 48	5 19	9 4	10 56	8 38
26	0 35	0 53	5 11	8 43	10 39	8 19
30	0 51	0 57	5 4	8 27	10 25	8 2

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Emersion.	Eclipses of 2nd Sat. Im. I. Emer. E.
D. H. M.	D. H. M.
1 9 30 P.M.	1 9 22 P.M. E.
8 11 24 P.M.	8 11 59 P.M. E.
16 1 18 A.M.	16 2 36 A.M. E.
24 9 41 P.M.	

4th Sat.
11 10 13 P.M. I.
12 1 30 A.M. E.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
Aldebaran	1	15 8 3 P.M.	Dark	10° N. &
		15 8 59 P.M.	Bright	83° N.
119 Tauri	5	16 6 58 P.M.	Bright	56° N. &
		16 7 27 P.M.	Bright	3° S.
120 Tauri	6	16 7 26 P.M.	Dark	1° N. &
		16 8 13 P.M.	Bright	62° N.
Sigma Leonis	4	22 6 20 P.M.	Dark	69° N. &
		22 7 28 P.M.	Bright	6° S.

TIMES OF CHANGES OF THE MOON,
And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Last Quarter	4D.	3H.	44M.	P.M.
New Moon .	12	0	47	P.M.
First Quarter	19	10	7	A.M.
Full Moon .	26	11	20	A.M.
Apogee	5	4		A.M.
Perigee ..	18	At Noon.		

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	23h. 47m	3° 53′	1h. 11m	6° 24′	6h. 33m	25° 27′	11h. 8m	7° 11′	0h. 44m	2° 18′	1h. 35m	9° 20′	22h. 32m	10° 2′
6	0 20	0 1	1 34	8 51	6 44	25 13	11 6	7 22	0 46	2 32	1 36	9 26	22 32	9 59
11	0 55	North.	1 57	11 12	6 54	24 57	11 5	7 32	0 48	2 47	1 37	9 33	22 33	9 56
16	1 32	8 43	2 21	13 27	7 5	24 38	11 3	7 40	0 51	3 1	1 38	9 39	22 34	9 53
21	2 11	13 15	2 45	15 34	7 16	24 15	11 2	7 47	0 53	3 15	1 39	9 45	22 34	9 50
26	2 51	17 25	3 9	17 31	7 27	23 50	11 1	7 51	0 55	3 28	1 40	9 51	22 34	9 47

APRIL.—ANGLING FOR SALMON.

NOTES ON NATURAL HISTORY.—APRIL.

All day the low-hung clouds have dropt
Their garner'd fulness down;
All day that soft grey mist hath wrapt
Hill, valley, grove, and town.
The very earth, the steamy air,
Is all with fragrance rife;
And grace and beauty everywhere
Are flushing into life.

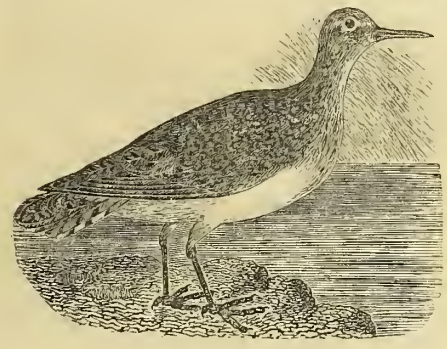
Down, down they come—those fruitful stores!
Those earth-rejoicing drops!
A momentary deluge pours.
Then thins, decreases, stops;
And ere the dimples on the stream
Have circled out of sight,
Lo! from the west, a parting gleam
Breaks forth of amber light.

THESE lines admirably describe the appearance of an April day with its alternations of rain and sunshine, which seem as though nature were struggling to shake off the dominion of winter, and to welcome summer.

Many of the migratory birds return to England in this month, and especially the cuckoo, which,

Hid in some bush, now sings her idle song,
Monotonous, yet sweet; now here, now there;
Herself but rarely seen.

Other birds also make their appearance in April, and one of these, the common sandpiper or summer snipe, only stays from April till September. "The habits of the common sandpiper," Mr. Yarrell observes, "are interesting; its actions



COMMON SANDPIPER.

are lively, and it is mostly seen while running nimbly along the gravelly margins of rivers, brooks, lakes, or ponds. When on the ground it is in constant motion, flirting the tail up and down, and almost as frequently stretching out, and again withdrawing the head and neck. When disturbed and flushed, this bird utters a piping note on taking wing, which has been compared by Colonel Sykes to the sounds, *wheet, wheet, wheet*; and Mr. Selby says, that, from the resemblance to its well-known note, one of the provincial names of this species is Willy Wicket." This bird feeds on worms and insects. It is seldom seen on the sea-shore, though it is fond of fresh water, and generally makes its nest in a hole in the bank of a stream. The female, when alarmed, tries all kinds of expedients to entice strangers from her nest, and, like the female lapwing, she affects lameness, or else runs with one wing hanging down as though it were broken, in order to divert the attention of a stranger from her brood. A correspondent of the *Magazine of Natural History*, after stating that the common sandpiper breeds in Lancashire, adds, "and I this year started an old one from her nest, at the root of a fir tree. She screamed out, and rolled about in such a manner, and seemed so completely disabled, that, although perfectly aware that her intention was to allure me from her nest, I could not resist my inclination to pursue her, and, in consequence, I had great difficulty in finding the nest again. It was built of a few dried leaves of the Weymouth pine, and contained three young ones, just hatched, and an egg, through the shell of which the bill of the young chick was just making its way; yet, young as they were, on my taking out the egg to examine it, the little things, which could not have been out of their shells more than an hour or two, set off out of the nest with as much celerity as if they had been running about a fortnight. As I thought the old one would abandon the egg if the young ones left the nest, I caught them, and covering them up with my hand for some time, they settled down again. Next day all four had disappeared." The full-grown sandpipers can swim and dive very well; and a writer on the subject says, that when a sandpiper, flying across a river, was attacked by a hawk, it instantly dived, and remained under water till the hawk had disappeared. It then emerged and rejoined its companions. It is said that when diving, this bird uses its wings under water the same as in flying; and on one occasion, when a sandpiper was shot at and wounded so that it fell near a brook, no sooner was it down than it ran as quickly as possible into the water, into which it plunged as a place of refuge. This bird is supposed to pass its winters generally in the south of Europe, but it has been found at Tangiers, in Asia Minor, and even in India.

In April the greater number of the wild flowers are in perfection, and, as Charlotte Smith sings,

The furze is yellow on the heath,
The banks with speedwell flowers are gay,
The oaks are budding, and beneath
The hawthorn soon will bear the wreath,
The silver wreath of May.

The sloe and the bullace are now in flower in the hedges, and the birds are busy pecking off the opening buds of the hawthorn and other trees. In the gardens the birds generally attack the gooseberry bushes in this month, and they have no mercy on the crocuses and other spring flowers, the petals of which frequently look jagged and torn from the laceration of their little beaks. Towards the close of the month the wild heart's-ease appears in the meadows, and it may, perhaps, be interesting to mention that this plant first excited the attention of Bartram, a celebrated American botanist, to the study of plants. He was walking in a field in early spring, and chancing to see a wild heart's-ease, he gathered it, and went on, thinking on various subjects, and carelessly plucking off the petals of the flower, without being well aware of what he was doing. He then chanced to cast his eye upon the remnant left in his hand, and was much struck with its singular appearance, as the stamens and pistil of the heart's-ease, when the petals have been stripped off, bear a considerable resemblance to a young bird when it has just issued from the shell. Bartram was so struck with this, that he gathered other flowers, and observing how curiously each was formed, he went home deeply impressed with the wonders of nature, and from that time he preferred the study of natural history to any other pursuit, and afterwards became the first botanist of America.

In gardens in warm and yet open situations, such as the garden of the London Horticultural Society at Chiswick, a number of beautiful plants are in flower. The spring gentian grows close to the ground, with its large bell-shaped flowers of the deepest and richest dark blue. The *Mahónia*, or ash berberry, forms an elegant little shrub, with bright dark green shining leaves, and a profusion of rich yellow clustered flowers. The Judas-tree (*Cércis Siliquástrum*) has a profusion of bright pink pea-like flowers, which are produced on the naked trunk and branches, appearing before the leaves. The *Magnólia conspícua*, or Yulan-tree, produces its large lily-like flowers, also before the leaves, and they appear in such profusion that the tree is sometimes completely covered with them, as if with a sheet. There was a large tree of this kind in a nursery at Kensington, near the entrance to Kensington Gardens, which, in April, 1827, was covered with upwards of eleven hundred flowers, and had a very singular effect when seen from the road on a moonlight night, as it looked like a white pyramid among the surrounding trees, so completely was it covered with blossoms. The *Wistária*, or *Glycine sinénsis*, is generally in all its beauty, with its racemes of shaded lilac flowers, in shape like those of the laburnum, which it generally precedes by a few days, the laburnum being followed by the *Robínia Pseud-Acácia*, the flowers of which are of the same shape, but of a different colour, being white slightly tinged with pink. Of all these trees, the *Wistária* is perhaps the most beautiful, as its flowers are delicately shaded; they are also slightly fragrant, and they appear very early in spring, a second crop being often seen in August or September. Some varieties of the laburnum are also fragrant, and others are remarkably beautiful, from the great length of their drooping racemes of flowers. The *Robínia*, or False Acacia, is the least beautiful of the three, though it also varies occasionally, and is sometimes much more ornamental than at others. The wild cherry comes into flower towards the middle of the month, and it is extremely ornamental in woods and pleasure-grounds, from the great profusion of its flowers.

Among the numerous insects that are found in gardens in April, may be mentioned the cuckoo-spit, or froth-fly, or frog-hopper; for by all these names is this curious insect popularly known. The names of cuckoo-spit and froth-fly both allude to the peculiar habit of the insect, when in the larva state, of enveloping itself in a kind of frothy secretion, somewhat resembling saliva, and which, indeed, was formerly supposed to be the saliva of the cuckoo, it being found on the young shoots of plants just about the time that the cuckoo is heard in the woods. The frothy secretion is supposed to be intended to preserve the tender body of the insect from the overpowering effects of the sun, as it has been observed to be produced in exact proportion to the heat of the weather. It is not known exactly how the froth is produced, but it is evidently only water, to which the insect gives its frothy appearance; as, when by any chance it becomes condensed, it drops like rain from the trees on which the insect is found. It is only in its larva, or infant state, that it produces the froth. The larva and the pupa resemble the perfect insect, except that the larva has no wings, and the pupa has very small ones. The perfect insect, however, has both wings and wing-cases, and it has the power of flying to a considerable distance. Sometimes, indeed, these insects are seen in vast multitudes on the wing. Professor Welsh states (as quoted by Messrs. Kirby and Spence), "that one night, about eleven o'clock, sitting in his study, his attention was attracted by what seemed the pelting of hail against his window, which surprised him by its long continuance; he opened the window, and found the noise was occasioned by a flight of the froth frog-hopper, which entered the room in such numbers as to cover the table. From this circumstance, and the continuance of the pelting, which lasted at least half an hour, an idea may be formed of the vast host of these insects passing over. It passed from east to west; and, as his window faced the south, the insects only glanced against it obliquely." One of the peculiarities of this insect is its power of leaping, which is so great, that, being assisted by its wings, it will sometimes leap a distance of five or six feet, which, as Messrs. Kirby and Spence observe, is more than two hundred and fifty times its own length, or as much as if a man were to take a leap a quarter of a mile high. This extraordinary activity appears to be principally occasioned by the great length of the thighs of the insect, which are also furnished on their outer margin with a fringe of stiff hairs or strong pines, which are of great use to the insect in leaping. The insect, when about to leap forward, places its hind thighs nearly erect, keeping them close to the body; it next with great violence kicks them out backwards, so as to stretch the leg in a right line, and to press the spines upon the ground; the spines then lay hold of the surface, and by their pressure enable the body to spring forwards. The great assistance afforded by the spines is clearly shown by the fact that, when the insect is on glass, of which the spines cannot catch hold of the surface, it cannot leap more than six inches.

CUCKOO-SPIT.

a, The frothy substance. b, The pupa.

PERFECT INSECT OF THE CUCKOO-SPIT.

About this season, if the buds of the rose-trees are examined just as the leaves are beginning to unfold, a little brown speck will be found attached to them here and there, looking like a seed. This is a case which conceals the larva or caterpillar of a very small moth (*Tinea rhodophagélla*). The larva is very destructive, and when it has devoured one leaf, it removes with its case to another. It is very small, being only a few lines long, and yellow, with a black head, and a ring of black spots round the body near to the head. When it goes into the pupa state, it only enlarges a little the case in which it lived while it was a caterpillar. The moth is very small; its body is of a silvery grey, and its upper wings are covered with small black dots. This caterpillar is most troublesome in the flower-pit, where it appears on rose-trees in pots, which are intended for early flowering; but though it is not a native of this country, it is now frequently found on rose-trees in the open air. Insects are very abundant at this season, probably for two reasons: first, that they can feed most easily upon the leaves when they are first developed; and, secondly, because they are wanted to feed the number of young birds which are hatched in early spring.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. 9h. 10h. 11h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	W	*Philip. James*	4 35	3 3	53½	7 21	——	3 44	18¾	8 2		19		4 55	5 10	121
2	Th	Day inc. 7h. 5m.	4 33	3 11	53¾	7 23	0 15	4 33	18½	8 53		20		5 30	5 50	122
3	F	Invent. of Cross.	4 31	3 17	54¼	7 24	0 56	5 20	20	9 47		21		6 10	6 35	123
4	S	[5th S. aft. East.	4 29	3 24	54½	7 26	1 33	6 7	21¾	10 46		☾		7 0	— 25	124
5	S	Rogation Sun.	4 28	3 30	54¾	7 27	2 3	6 53	24½	11 49		23		7 55	8 40	125
6	M	*St. John Evan.*	4 26	3 35	55	7 29	2 30	7 38	28	Afternoon		24		9 15	9 55	126
7	Tu	Beta Leonis souths 8h 40m P.M.	4 24	3 39	55¼	7 30	2 55	8 24	31¾	2 3		25		10 30	11 5	127
8	W	East. Term ends	4 22	3 43	55½	7 32	3 18	9 9	36¼	3 12		26		11 35	No Tide.	128
9	Th	Ascension Day.	4 21	3 47	55¾	7 33	3 41	9 56	40¾	4 23		27		0 5	0 25	129
10	F	[*Holy Thursday*	4 19	3 50	56	7 35	4 7	10 45	45½	5 38		28		0 45	1 5	130
11	S	Spica Virginis souths 10h 0m P.M.	4 17	3 52	56¼	7 36	4 31	11 37	49¾	6 54		○		1 30	1 45	131
12	S	Sun. aft. Asc. Day	4 15	3 54	56½	7 38	5 5	Afternoon	53½	8 11		1		2 5	2 25	132
13	M	Old May Day.	4 14	3 55	56¾	7 39	5 42	1 29	56½	9 25		2		2 45	3 5	133
14	Tu	Length of day 15h 29m	4 12	3 55	57	7 41	6 28	2 28	58¼	10 32		3		3 30	3 45	134
15	W	Length of night 8h 29m	4 11	3 55	57¼	7 42	7 23	3 29	58½	11 32		4		4 10	4 30	135
16	Th	Day breaks 1h 0m	4 10	3 55	57½	7 44	8 28	4 28	57¼	Morning.		5		4 50	5 15	136
17	F	Twilight ends 11h 0m P.M.	4 8	3 53	57¾	7 45	9 39	5 26	54½	0 20		6		5 45	6 10	137
18	S	Ox. Term ends	4 6	3 52	58	7 47	10 54	6 21	51	1 2		7		6 40	7 10	138
19	S	Whit Sunday	4 5	3 50	58¼	7 48	Afternoon	7 12	47	1 35		8		7 45	8 20	139
20	M	Whit Monday	4 4	3 47	58½	7 49	1 24	8 2	42½	2 1		9		9 5	9 40	140
21	Tu	Whit Tuesday	4 3	3 44	58¾	7 50	2 38	8 50	37¾	2 27		10		10 15	10 50	141
22	W	Ember Week	4 2	3 40	58¾	7 52	3 49	9 37	33¼	2 49		11		11 25	11 55	142
23	Th	Camb. Term div.	4 0	3 36	59	7 53	5 1	10 25	29	3 14		12		No Tide.	0 20	143
24	F	Qu Vic. born 1819	3 59	3 31	59¼	7 55	6 10	11 12	25¼	3 40		13		0 45	1 5	144
25	S	Pr Helena b 1846	3 58	3 26	59½	7 56	7 17	At Midnight.	22¼	4 6		14		1 30	1 50	145
26	S	Trin. Sunday	3 57	3 20	59¾	7 58	8 21	Morning.	——	4 38		○		2 10	2 30	146
27	M	King George I. b.	3 56	3 13	59¾	7 59	9 18	0 49	20	5 14		16		2 50	3 5	147
28	Tu	[*Ven. Bede*	3 55	3 7	60	8 0	10 10	1 38	18¾	5 55		17		3 25	3 40	148
29	W	K. Chas. II. rest.	3 54	2 59	60¼	8 1	10 57	2 26	18½	6 42		18		4 0	4 15	149
30	Th	*Corpus Christi*	3 53	2 52	60¼	8 2	11 34	3 15	19¼	7 37		19		4 35	4 50	150
31	F	Arcturus souths at 9h 32m P.M.	3 52	2 43	60½	8 3	Morning.	4 2	20¾	8 35		20		5 10	5 30	151

MAY.

The Sun is situated north of the Equator; and on the 21st, at 11h. 25m. A.M., passes from the sign Taurus to Gemini (the Twins), having been in the former sign 31 days and 9 minutes. He rises on the 1st at 1°¼ N. of E.N.E., and on the 25th at N.E. by N. He sets on the same days at 1°¼ N. of W.N.W., and near the N.W. by N. points of the horizon. On the first day he is 95,785,000 miles distant from the Earth.

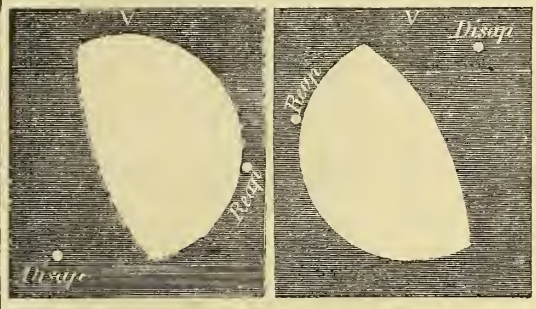
The Moon is in Sagittarius till the morning of the 3d, then passes into Capricornus, and into Aquarius on the morning of the 5th; into Pisces near midnight on the 6th; into Cetus on the morning of the 8th; and till the evening of the 11th she is moving on the boundaries of Cetus, Pisces, and Aries. On the 11th, at about 10h. P.M., she passes into Taurus, and crosses the Milky Way during the 14th: she enters Gemini on the 15th; Cancer on the 16th; Leo on the 17th; Virgo on the 20th; Libra on the 23d; Scorpio on the 25th; Ophiuchus, near midnight, on the 25th; Sagittarius on the 28th; and Capricornus on the 29th.

She is above the horizon when the Sun is below, during the morning hours, for a few days at the beginning of the month, and for several days at the end of the month; and during the evening hours, from the 13th to the 26th.

She is at her extreme south declination on the 1st; on the Equator on the 8th; at her extreme north declination on the 15th; on the Equator again on the 21st; and reaches, a second time this month, an extreme south declination on the 28th.

She is near Saturn on the 9th; Uranus on the 10th; Mercury and Venus on the 13th; Mars on the 16th; and Jupiter on the 19th.

OCCULTATION OF JUPITER BY THE MOON ON MAY 19, 1850, AS SEEN BY A TELESCOPE WHICH



The planet will disappear at the un-illuminated limb, and will reappear at the bright limb. To observe these phenomena, a good telescope will be necessary, as the Sun will be above the horizon at the time of their occurrence. The disappearance takes place at 6h. 32m. P.M., and the reappearance at 7h. 37m. P.M. After sunset, the planet will be seen situated north of the Moon's bright limb.

Mercury is in the constellation Taurus throughout the month.

He is an evening star, and sets on the 1st at 8h. 53m.; on the 5th, at 9h. 20m.; on the 10th, at 9h. 41m.; on the 15th, at 9h. 57m.; on the 20th, at 9h. 55m.; on the 25th, at 9h. 41m.; and on the last day, at 9h. 6m. On the 1st, the Sun sets earlier than this planet by 1h. 32m.; on the 5th, by 1h. 53m.; on the 10th, by 2h. 10m.; on the 13th, 14th, and 15th, by 2h. 15m.; on the 20th, by 2h. 6m.; on the 26th, by 1h. 45m.; and on the last day, by 1h. 3m. These intervals of time are the largest in the year; and the planet is most favourably situated for observation between the 5th and the 25th, and particularly about the middle of this month. On any clear evening after sunset he may readily be seen. He sets on the 1st at N.W. by N.; and during the month he sets between this point and N.W. He is moving eastward till towards the end of the month, when he is stationary among the stars. He is near Venus on the 2d; the Moon on the 13th; and Venus again on the 22d. He is at his greatest eastern elongation on the 16th. His position among the stars will be seen in the diagram in July, which is a continuation of his path from that inserted in April.

Venus is in the constellation Taurus till the 26th, and in Gemini from the 27th. She is crossing the Milky Way from the 21st to the 31st.

She is an evening star, and sets on the 1st, at 8h. 48m. P.M.; on the 15th, at 9h. 28m. P.M.; and on the 31st, at 10h. 2m. P.M.; on the 7th, near the N.W. by N. point of the horizon. She is moving eastward among the stars; is near Mercury on the 2d, the Moon on the 13th, and Mercury again on the 22d. For her path in the heavens see the diagram in next month. Her telescopic appearance is almost that of a circle, and very little larger than that shown in January.

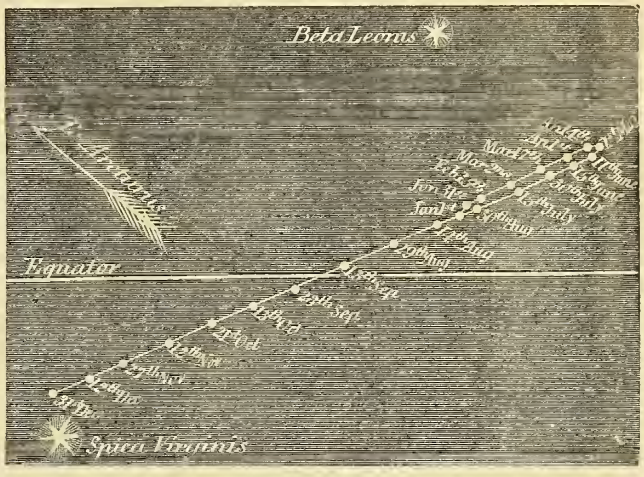
Mars is in the constellation Gemini till the 6th. On this day he passes into Cancer.

He is an evening star, and sets on the 1st at 1h. 20m. A.M.; on the 15th, at 0h. 46m. A.M.; and on the last day, at 0h. 5m. A.M.; near the N.W. by N. till the 20th day, and at the N.W. by N. on the 21st. For his path in the heavens see the diagram in next month.

Jupiter is in the constellation Leo throughout the month. He sets on the 1st, at 3h. 11m. A.M.; and on the last day, at 1h. 14m. A.M.; at the W. by N. point of the horizon. His altitude on southing is 46°½ on the 1st, and is 46° on the last day. He is nearly stationary among the stars till towards the end of the month, when he begins to move slowly eastward, and is near the Moon on the 19th. His path among the stars, and his relative position to stars near him throughout the year, are shown in the annexed diagram.

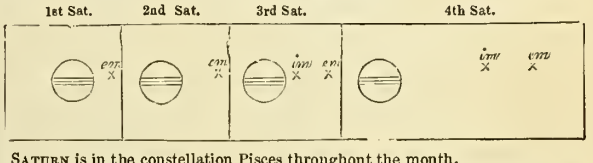
Jupiter's Satellites.—A few emersions of the first and second, and an immersion and emersion of the third, are visible. The relative position of the satellite to Jupiter, at the instant of the eclipse, is shown in the annexed diagram, as viewed through an inverting telescope.

PATH OF JUPITER THROUGHOUT THE YEAR 1850.



Scale, 12 degrees to one inch.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Pisces throughout the month.

He is a morning star, and rises E. by N. at 3h. 58m. A.M. on the 1st; at 3h. 6m. A.M. on the 15th; and at 2h. 6m. A.M. on the last day. He souths at an altitude of 42°⅔ nearly.

Uranus is in the constellation Aries throughout the month. He rises nearly midway between the E. by N. and the E.N.E. points of the horizon on the 1st day, at 4h. 5m. A.M., and on the last day at 2h. 15m. A.M.

Neptune rises on the 1st, at 2h. 42m. A.M.; on the 15th, at 1h. 46m. A.M.; and on the last day, at 0h. 44m. A.M., midway between the E. by S. and the E.S.E. point of the horizon.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Afternoon	Mars. Afternoon	Jupiter. Afternoon	Saturn. Morning	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	0 55	0 58	5 2	8 23	10 21	7 59
6	1 12	1 3	4 54	8 3	10 4	7 40
11	1 23	1 9	4 46	7 43	9 46	7 21
16	1 28	1 16	4 37	7 24	9 29	7 2
21	1 26	1 23	4 29	7 4	9 11	6 41
26	1 15	1 29	4 21	6 45	8 53	6 22
31	0 56	1 36	4 13	6 27	8 35	6 2

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Emersion.				2nd Sat. Im. I.		Emer. E.	
D.	H.	M.		D.	H.	M.	
1	11	35	P.M.	3	9	9	P.M. E.
9	1	30	A.M.	10	11	47	P.M. E.
17	9	53	P.M.				
24	11	48	P.M.				

3rd Sat.

5	9	45	P.M.	E.
12	10	37	P.M.	I.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars	Magnitude.	Times of disappearance & re-appearance of the Star. D. H. M.		At which limb of the Moon.	Between what Latitudes visible.
d 2 Cancri	6	16 10 11	P.M.	Dark	19° N. &
		16 11 2	P.M.	Bright	90° N.
Regulus	1	18 3 11	P.M.	Dark	60° N. &
		18 4 8	P.M.	Bright	10° S.
Jupiter		19 6 32	P.M.	Dark	13° N. &
		19 7 37	P.M.	Bright	90° N.
Xi 1 Sagitarii	6	28 11 49	P.M.	Bright	18° N. &
		29 1 10	A.M.	Dark	69° N.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Last Quarter	4D.	10H.	46M.	A.M.
New Moon ..	11	11	9	P.M.
First Quarter	18	3	52	P.M.
Full Moon ..	26	0	8	A.M.
Apogee ..	2	At Midnight.		
Perigee ..	14	8		P.M.
Apogee ..	30	5		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination North.	VENUS. Right Ascension	VENUS. Declination North.	MARS. Right Ascension	MARS. Declination North.	JUPITER. Right Ascension	JUPITER. Declination North.	SATURN. Right Ascension	SATURN. Declination North.	URANUS. Right Ascension	URANUS. Declination North.	NEPTUNE. Right Ascension	NEPTUNE. Declination South.
1	3h. 31m	20° 49′	3h. 34m	19° 16′	7h. 39m	23° 22′	11h. 0m	7° 54′	0h. 57m	3° 42′	1h. 41m	9° 57′	22h. 35m	9° 45′
6	4 7	23 14	3 59	20 49	7 50	22 50	10 59	7 56	0 59	3 55	1 43	10 3	22 35	9 43
11	4 39	24 38	4 25	22 8	8 2	22 15	11 0	7 55	1 2	4 7	1 44	10 9	22 35	9 42
16	5 3	25 7	4 51	23 11	8 13	21 37	11 0	7 53	1 4	4 19	1 45	10 15	22 36	9 41
21	5 21	24 53	5 17	23 58	8 25	20 56	11 1	7 49	1 6	4 30	1 46	10 20	22 36	9 40
26	5 30	24 3	5 44	24 28	8 36	20 12	11 1	7 43	1 7	4 41	1 47	10 26	22 37	9 39

MAY.—MACKEREL FISHING.—BRIGHTON BOATS.

NOTES ON NATURAL HISTORY.—MAY.

Among all the songsters of the grove at this season, one of the most delightful is the fauvette, or garden warbler. It is not very abundant in England, but in

GARDEN WARBLER, OR FAUVETTE.

Belgium it is a great favourite; and it is, probably, oftener in this country than people are aware of, as it is a very shy, timid bird, and it is very difficult to obtain a sight of it. In Belgium it is frequently kept in a cage; and its song is found very little inferior to that of the nightingale. Some of the notes have a peculiar softness and sweetness, while others are more loud and powerful, and others remarkably quick and lively. "It first visits us," says Sweet, "in the spring, about the latter end of April, or the beginning of May; and its arrival is soon made known by its very loud and long song. It generally begins very low, not unlike the song of the swallow, but raises it by degrees until it resembles the song of the blackbird, singing nearly all through the day, and the greater part of the time it stays with us, which is but short, as it leaves us again in August. In confinement it will sing nearly all through the year if it be treated well." In a wild state the fauvette is found in gardens and plantations, where it feeds chiefly on fruits, devouring only one kind of caterpillar, which, singularly enough, seems to be eaten by no other bird, viz. the caterpillar of the cabbage-butterfly. It is said to eat as many as from six to ten of these caterpillars in one day. It is particularly fond of strawberries, and will attack cherries even before they are ripe.

The long-tailed titmouse generally builds in this month. These are pretty little birds, and their nest is curiously constructed, as it generally hangs about five feet from the ground, and is of a very curious and singular form, about the size of a small melon, with a hole on one side through which the parent bird enters. The long-tailed titmice may often be seen on a fine day in May flying round and round after one another, as if they were having a game at play. They are generally found in parties of ten or more together, the birds belonging to a brood having the habit of continuing together after they have attained their full size.

There the green thorn her silver buds
  Expands to May's enlivening beam;
Hottonia blushes on the floods;
  And where the slowly-trickling stream
'Mid grass and spiry rushes glides,
Her lovely flowers the Buckbean hides.

Wound in the hedgerow's oaken boughs,
  The Woodbine's tassels float in air;
And, blushing the uncultured Rose,
  Hangs high her beauteous blossoms there;
Her fillets there the Nightshade weaves,
And the Bryonia winds her scollop'd leaves.

In the lone copse, or shadowy dale,
  Wild cluster'd knots of Harebells blow,
And droops the Lily of the Vale,
  The Periwinkle's leaves below;
The Orchis race with varied beauty see,
Mock the gay Fly or the exploring Bee.

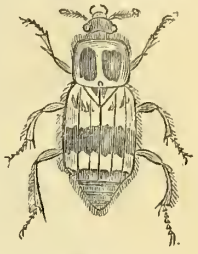
* * *

Singular as are the shapes assumed by some of the orchideous epiphytes, those of the terrestrial *Orchidăceæ* are scarcely less extraordinary. These plants are abundant in woods on chalky soils, particularly in the chalk pits and on the chalk hills of Kent. The flowers of the genus *Orchis* are all very curiously formed: the germen, or incipient seed-vessel, is long and twisted, so as to supply the place of a footstalk to the flower; and the largest petal, which is made to point downwards, in consequence of the distortion of the germen, is by far the most conspicuous part of the flower, and is termed the lip. It is this lip which represents so many curious forms; and sometimes it takes so closely the resemblance of an insect, as to deceive even an experienced eye. In one species, the monkey orchis, the lip is deeply cut, and the flower takes the figure of a little man or monkey dancing, with a hood over his head. In the lizard orchis, the lip is cut into three parts, the centre one of which is very long, and represents the tail of the lizard, while the two shorter ones form no bad representation of its feet. In the man orchis, the flower stem seems hung all over with effigies of little yellow men with green hats. The bee orchis, the spider orchis, and the fly orchis have all very curiously-formed flowers, bearing a striking resemblance to the insects from which they take their respective names. The fly orchis is very abundant in the chalky districts of south Kent, where it is found with the bee orchis, but is easily distinguished from all the other kinds of the genus by the blue spot in the middle of that part of the lip which forms the back of the fly. All the species which resemble insects flower in May and June, and they are all very difficult to cultivate in gardens.

FLY ORCHIS.

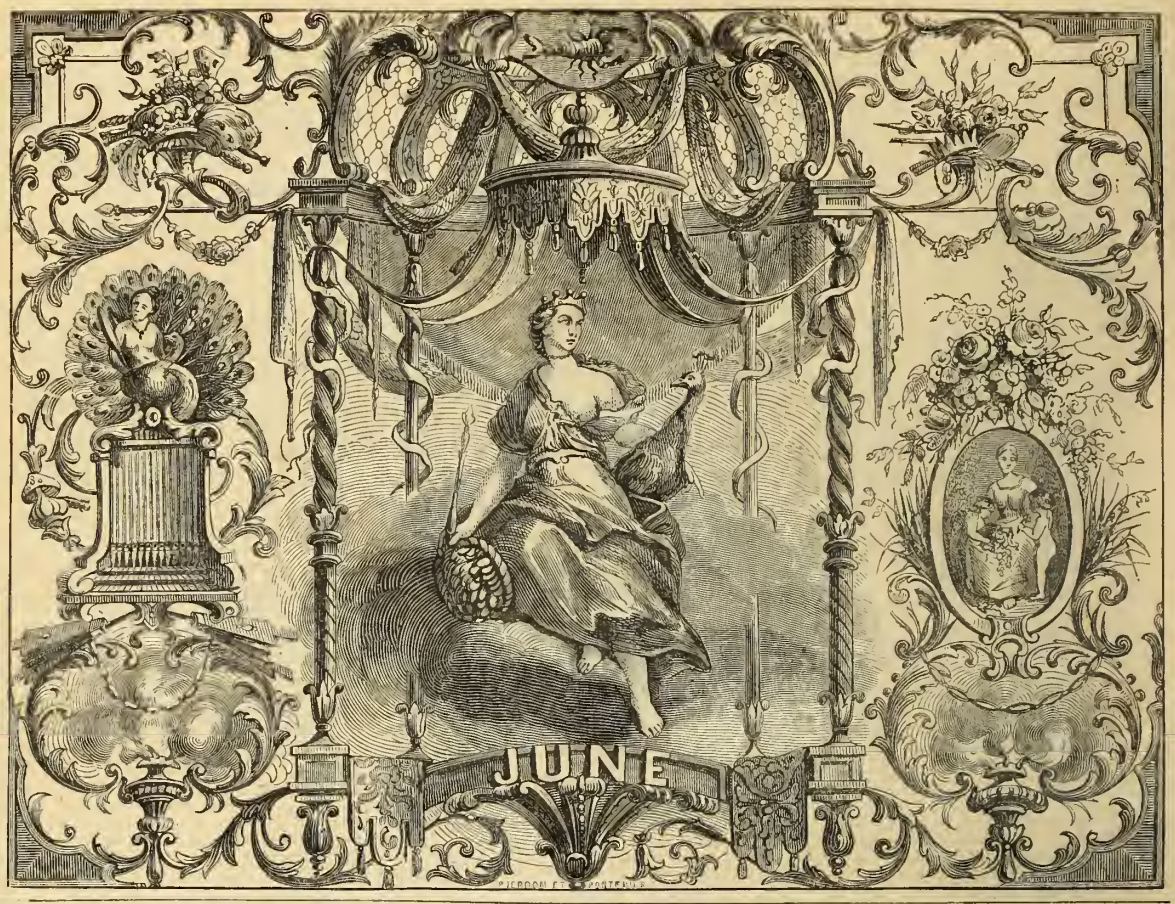
In this month the great round-leaved sallow is in flower, and is very ornamental. It is one of the few species belonging to the willow genus that prefer a dry soil, as most of the other kinds will only grow in marshy places, or where their roots can have free access to water. Above two hundred species of willow are known, and they vary in size from a shrub only two or three inches high, to timber trees fifty or sixty feet high. Some of the smaller kinds are used for basket-making; and there are little islands in the Thames, called holts, set aside purposely for growing them. All the willows which are used for making baskets are called oslers, and those that have woolly leaves are called sallows, the true willows having long thin leaves. All the trees included in the genus belong to the true willows. In the neighbourhood of London, and in several other parts of Great Britain, the young people gather branches of the great sallow on Palm Sunday, which they carry in imitation of palm branches. The flowers of the willow have no petals, but they are ornamental from the rich golden colour of the anthers of their stamens.

In the insect world, the beetles are now particularly abundant. These creatures generally bury themselves in the ground during the winter, but at the first warmth of spring they creep out and seem to enjoy themselves in the beams of the sun. One of the most curious of the beetle tribe is the burying beetle *(Necrophòrus vespillo)*, one of the marked peculiarities of which consists in the custom which these beetles have of interring small animals, such as mice and moles, for the purpose of depositing their eggs in the decaying carcase. At first sight it appears impossible that these beetles, which are only of a moderate size, could possibly contrive to bury creatures so much larger than themselves; but the manner in which it is done is very ingenious. The beetle first walks round the dead body, and seems to examine it carefully on every side. It then begins gradually to remove the earth from below the body, which slowly sinks into the hollow thus made, the beetle continuing to work below it till it has descended to a sufficient depth, after which the little labourer covers the body carefully with the loose soil it has thrown out during the process of excavation. The sense of smell of these beetles, like that of many other insects, is extremely delicate, and "no sooner has any of the smaller quadrupeds perished, than one or more of these gravediggers will make their appearance, and in a few hours the corpse will be interred." It may easily be supposed that the remarkable habits of these beetles were not even guessed at for some time; and, indeed, they were not known till 1752, when they were observed by M. Gleditsch, and a very interesting account is given of the mode in which he discovered this curious fact by Messrs. Kirby and Spence. M. Gleditsch had "often remarked that dead moles, when laid upon the ground, especially if upon loose earth, were almost sure to disappear in the course of two or three days, often of twelve hours. To ascertain the cause, he placed a mole upon one of the beds of his garden. It had vanished by the third morning; and on digging where it had been laid, he found it buried to the depth of three inches, and under it four beetles which seemed to have been the agents in this singular inhumation. Not perceiving anything particular in the mole, he buried it again; and on examining it at the end of six days he found it swarming with maggots, apparently the issue of the beetles, which M. Gleditsch now naturally concluded had buried the carcase for the food of their future young. To determine these points more clearly, he put four of these insects into a glass vessel half filled with earth and properly secured, and upon the surface of the earth two frogs. In less than twelve hours one of the frogs was interred by two of the beetles: the other two ran about the whole day, as if busied in measuring the dimensions of the remaining corpse, which on the third day was also found buried. He then introduced a dead linnet. A pair of the beetles were soon engaged upon the bird. They began their operations by pushing out the earth from under the body, so as to form a cavity for its reception; and it was curious to see the efforts which the beetles made by dragging at the feathers of the bird from below to pull it into its grave. The male having driven the female away, continued to work alone for five hours. He lifted up the bird, changed its place, turned it and arranged it in the grave, and from time to time came out of the hole, mounted upon it and trod it under foot, and retired below and pulled it down. At length, apparently wearied with this uninterrupted labour, it came forth and leaned its head upon the earth beside the bird without the smallest motion as if to rest itself, for a full hour, when it again crept under the earth. The next day, in the morning, the bird was an inch and a half under ground, and the trench remained open the whole day, the corpse seeming as if laid out upon a bier, surrounded with a rampart of mould. In the evening it had sunk half an inch lower, and in another day the work was completed and the bird covered. M. Gleditsch continued to add other small dead animals, which were all sooner or later buried; and the result of his experiment was, that in fifty days four beetles had interred in the very small space of earth allotted to them, twelve carcases, viz. four frogs, three small birds, two fishes, one mole, and two grasshoppers, besides the entrails of a fish, and two morsels of the lungs of an ox. In another experiment a single beetle buried a mole forty times its own bulk and weight in two days. It is plain that all this labour is incurred for the sake of placing in security the future young of these industrious insects, along with a necessary provision of food. One mole would have sufficed a long time for the repast of the beetles themselves, and they could have more conveniently fed upon it above ground than below. But if they had left thus exposed the carcase in which their eggs were deposited, both would have been exposed to the imminent risk of being destroyed at a mouthful by the first fox or kite that chanced to espy them."



BURYING BEETLE.

The caterpillar of the hawthorn butterfly is frequently very destructive at this season, feeding upon the young leaves as soon as the buds unfold, and stripping the trees so completely as to give them the appearance of winter even in early spring. The hawthorn butterfly very much resembles the cabbage butterfly; but the veins are black, and the under side of the wings is white, while the veins of the cabbage butterfly are white, and the under side of the wings is of a pale yellow. The hawthorn butterfly's eggs are of a pale yellow, and they are laid on leaves without any covering, but generally in rows close together. The caterpillars, when first hatched, are of a dirty yellow, with a black head, and a black ring just below it, and a brownish-red stripe on each side. They are gregarious, and spin a web on the leaf, under which they live until they have destroyed every portion of the cellular tissue, so that the leaves appear quite stripped off all the trees they have attacked. These caterpillars, however, appear only occasionally, and at intervals of sometimes several years in duration; and as birds are very fond of them, great numbers are devoured. Enough, however, remain to give a most singular appearance to the hawthorn trees which they have attacked, for as they devour the whole of the fleshy part of the leaf, leaving what may be called the skeleton, which serves to support the webs they have spun, the whole of the branches appear covered with a transparent drapery of a most singular description.



M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age	DURATION OF MOONLIGHT. After Sunset. O'Clock. 0h. 10 11h.	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	*Nicomede*	3 51	2 35	60½	8 4	0 5	4 48	23	9 36		21		5 50	6 10	152
2	S	1ST S. aft. TRIN.	3 51	2 26	60¾	8 5	0 34	5 33	26¼	10 40		22		6 35	6 55	153
3	M	Length of day 16h 16m	3 50	2 16	60¾	8 6	0 58	6 17	29¾	11 44		☾		7 20	7 50	154
4	Tu	Length of night 7h 43m	3 50	2 6	61	8 7	1 22	7 2	34	Afternoon		24		8 25	9 0	155
5	W	King of Han. b	3 49	1 56	61¼	8 8	1 45	7 47	38½	2 3		25		9 35	10 5	156
6	Th	Alpha Libræ souths 9h 42m P.M.	3 48	1 46	61¼	8 9	2 8	8 34	43	3 13		26		10 35	11 5	157
7	F	Day inc. 8h. 38m.	3 47	1 35	61¼	8 10	2 33	9 23	47½	4 28		27		11 35	At Midnight.	158
8	S	Spicâ Virginis souths 8h 9m P.M.	3 47	1 24	61½	8 11	3 1	10 16	51¾	5 45		28		No Tide.	0 30	159
9	S	2ND S. aft. TRIN.	3 46	1 12	61½	8 11	3 35	11 13	55¼	7 2		29		0 50	1 15	160
10	M		3 46	1 0	61½	8 12	4 17	Afternoon	57½	S 14		○		1 40	2 0	161
11	Tu	*St. Barnabas*	3 45	0 48	61¾	8 13	5 10	1 14	58	9 21		1		2 25	2 48	162
12	W	Trin. Term ends	3 45	0 36	61¾	8 14	6 12	2 17	58	10 16		2		3 10	3 35	163
13	Th	Arcturus souths 8h 40m P.M.	3 45	0 24	61¾	8 15	7 24	3 17	56	11 1		3		3 55	4 20	164
14	F	Length of day 16h 31m	3 45	0 11	61¾	8 16	8 40	4 15	52¾	11 37		4		4 45	5 10	165
15	S	Epsilon Bootis souths 9h 2m P.M.	3 44	After 12 o'clock.	61¾	8 16	9 56	5 9	48¾	Morning.		5		5 35	6 5	166
16	S	3RD S. aft. TRIN.	3 44	0 15	61¾	8 16	11 14	6 0	44¼	0 6		☽		6 30	7 0	167
17	M	*St. Alban*	3 44	0 27	62	8 16	Afternoon	6 49	39½	0 29		7		7 30	8 5	168
18	Tu	Alpha Coronæ Borealis sths 9h 41m P.M.	3 44	0 40	62	8 17	1 40	7 36	34¾	0 58		8		8 35	9 15	169
19	W	Alpha Serpentis souths 9h 46m P.M.	3 44	0 53	62	8 17	2 51	8 23	30½	1 20		9		9 45	10 15	170
20	Th	Acces. Queen Vic.	3 44	1 6	62	8 18	3 59	9 9	26½	1 46		10		10 50	11 20	171
21	F	Proclamation	3 44	1 19	62	8 18	5 7	9 57	23¼	2 10		11		11 50	No Tide.	172
22	S	[Summer com.	3 44	1 32	62	8 19	6 12	10 45	20¾	2 40		12		0 15	0 45	173
23	S	4TH S. aft. TRIN.	3 45	1 45	62	8 19	7 11	11 33	19	3 13		13		1 5	1 30	174
24	M	*St. John Baptist*	3 45	1 58	62	8 19	8 6	Morning.	—	3 53		●		1 50	2 10	175
25	Tu	[Midsum. Day	3 46	2 10	62	8 19	8 54	0 22	18½	4 36		15		2 30	2 50	176
26	W	Length of dsy 16h 32m	3 46	2 23	62	8 18	9 34	1 10	18¾	5 29		16		3 5	3 25	177
27	Th	Antares souths 9h 57m P.M.	3 46	2 35	61¾	8 18	10 9	1 58	20	6 26		17		3 45	4 0	178
28	F	Q. Vic. cro. 1838	3 46	2 48	61¾	8 18	10 38	2 44	22	7 25		18		4 15	4 35	179
29	S	*St. Peter*	3 47	3 0	61¾	8 18	11 4	3 29	24¾	8 28		19		4 50	5 10	180
30	S	5TH S. aft. Trin.	3 47	3 12	61¾	8 18	11 26	4 14	28¼	9 33		20		5 30	5 45	181

JUNE.

The Sun is situated north of the Equator, and reaches his extreme position in north declination on the 21st. On this day, at 8h. P.M., he passes from the sign Gemini to Cancer (the Crab), having been in the former sign 31 days, 8 hours, and 35 minutes. He rises on the 1st at 1°¾ N. of N.E. by N; and on the 21st at 4° N. of the same point; and sets on the same days at 1°¾ N., and 4° N. of N.W. by N. respectively. On the 1st day he is 96,375,000 miles distant from the Earth.

The Moon enters Aquarius on the 1st; Pisces on the 3rd; in and near Cetus, passing the boundaries of Pisces and Aries, on the 4th, 5th, 6th, and 7th; in Taurus on the 8th and 9th. She is crossing the Milky Way during the evening of the 10th; is in Gemini on the 11th; enters Cancer on the evening of the 12th; Leo on the 14th; Virgo on the 16th; Libra on the 20th; Ophiuchus on the 22nd; Sagittarius on the 24th; Capricornus on the 26th; Aquarius on the 28th; and Pisces on the 30th.

She is above the horizon when the Sun is below, during the morning hours, for a few days at the beginning of the month, and for several days towards the end of the month; and during the evening hours, from the 12th to the 26th.

She is on the Equator on the 5th, and going north; reaches her extreme north position on the 11th; then begins to move south; crosses the Equator on the 17th, near midnight; and reaches her extreme south position on the 25th.

She is near Saturn on the 5th; Uranus, on the 6th; Mercury, on the 10th; Venus, on the 12th; Mars, on the 14th; and Jupiter, on the 16th.

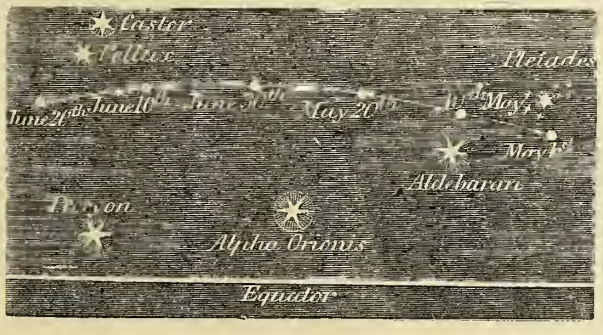
Mercury is in the constellation Taurus all the month, and situated in the Milky Way.

On the 1st day he sets at 8h. 59m., and on the 7th at 8h. 14m. After this time the planet sets before the Sun sets. On the 15th this planet and the Sun rise together. On the 25th Mercury rises at 3h. 3m., being 43 minutes before the Sun; and which interval increases, till, on the last day the planet's rising precedes the Sun by one hour. On the 25th he rises midway between E.N.E. and N.E. by N. He moves westward among the stars till the 21st, and is stationary on the 22nd, and moves slowly eastward on the 23rd. He is near the Moon on the 10th. For his position in the heavens, see the diagram in next month.

Venus is in the constellation Gemini till the 17th, and in that of Cancer from the 18th.

She is an evening star; and sets on the 1st, at 10h. 3m. P.M.; on the 15th, at 10h. 13m. P.M.; and on the last day at 10h. 5m. P.M. Till the 25th she sets between the N.W. by N. and the N.W.; and on the 26th at the N.W. by N.

PATH OF VENUS FROM MAY 1 TO JUNE 20, 1850.



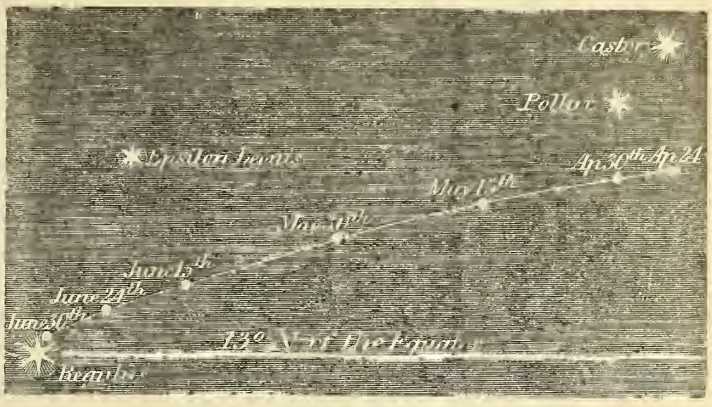
Scale, 24 degrees to one inch.

points of the horizon. She is moving eastward among the stars; is in perihelion on the 2nd, and is near the moon on the 12th. Her path among the stars is shewn in the annexed diagram, which is a continuation of that in March.

Mars is in the constellation Cancer till the 20th, on which day he passes into Leo.

He is an evening star, and sets on the 1st at 0h. 2m. A.M.; on the 15th, at 11h 20m. P.M.; and on the last day at 10h 40m. P.M.; near the N.W by N. at the beginning of the month, and at the W N.W. on the 29th. He is moving eastward among the stars; and is near the moon on the 14th. His altitude above the horizon when he souths on the 1st is 57°¾, and on the last day is 52°¼. His

PATH OF MARS FROM APRIL 24 TO JUNE 30, 1850.



Scale, 12 degrees to one inch.

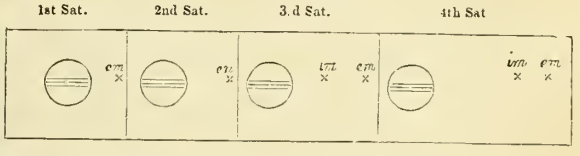
path in the heavens is shewn in the annexed diagram which is continued from that in March.

Jupiter is in the constellation Leo throughout the month.

He sets on the 1st day at 1h. 10m. A.M., and on the last day at 11h. 19m. P.M., at the W. by N. point of the horizon. His altitude on the 1st is 46°, and is 44°¾ on the last day. He moves slowly eastward among the stars, and is near the Moon on the 16th. For his path in the heavens, see the diagram in last month.

Jupiter's Satellites.—A few eclipses only are visible. The relative position of the Satellite to Jupiter at the instant of the eclipse is shewn in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Pisces throughout the month.

He is a morning star; and rises near W. by N. on the 1st, at 2h. 3m. A.M.; on the 15th, at 1h. 10m. A.M.; and on the last day, 13m. after midnight. He souths at an altitude of 44°¾ nearly. He is near the Moon on the 5th. For his path in the heavens see the diagram in September.

Uranus is in the constellation Aries throughout the month.

He rises on the 1st at 2h. 12m. A.M., and on the last day at 0h. 20m. A.M. He is near the Moon on the 6th.

Neptune rises on the 1st at 0h. 40m. A.M.; on the 15th, at 11h. 42m. A.M.; and on the last day, at 10h. 51m. A.M., midway between the E. by S. and the E.S.E. points of the horizon.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury	Venus.	Mars.	Jupiter.	Saturn.	Neptune
	Afternoon	Afternoon	Afternoon	Afternoon	Morning	Morning
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	0 51	1 38	4 11	6 23	8 32	5 59
6	0 23	1 45	4 3	6 5	8 14	5 39
11	Morning	1 52	3 55	5 47	7 56	5 19
16	11 23	1 58	3 47	5 29	7 37	5 0
21	10 59	2 4	3 39	5 11	7 19	4 40
26	10 42	2 10	3 31	4 54	7 1	4 20
30	10 35	2 14	3 24	4 40	6 46	4 1

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Emersion	3rd Sat. Im. I. Emer E.
D. H. M.	D. H. M.
9 10 6 P.M.	17 9 36 P.M. E.
	24 10 32 P.M I.
2nd Sat.	
11 11 32 P.M.	
	4th Sat
	17 10 25 P.M. I.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon	Between what Latitudes visible.
		D. H. M.		
42 Aquarii	6	2 1 22 A.M.	Bright	24° N. &
		2 2 35 A.M.	Dark	76° N.
Chi Leonis	4	15 11 57 P.M. At the time of Emersion the Moon will be below the horizon	Dark	25° N & 90° N.
29 Ophiuchi	6	23 1 56 A.M.	Dark	4° N. &
		23 2 32 A.M.	Bright	70° N.
70 Aquarii	6	30 0 37 A.M.	Bright	14° N &
		30 1 47 A.M.	Dark	79° N

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.	
Last Quarter	3	3	47	A.M.
New Moon ..	10	7	20	A.M.
First Quarter	16	10	23	P.M.
Full Moon ..	24	2	10	P.M.
Perigee ..	11	7		P.M.
Apogee ..	27	4		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination North.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination North	Uranus. Right Ascension	Uranus. Declination North	Neptune Right Ascension	Neptune Declination South.
1	5h. 29m	22° 29′	6h. 16m	24° 40′	8h. 50m	19° 15′	11h. 2m	7° 34′	1h. 10m	4° 53′	1h. 48m	10° 32′	22h. 36m	9° 38′
6	5 22	20 57	6 43	24 30	9 2	18 24	11 4	7 25	1 11	5 2	1 48	10 36	22 36	9 38
11	5 10	19 29	7 9	24 2	9 13	17 31	11 5	7 14	1 13	5 11	1 49	10 41	22 36	9 38
16	5 0	18 28	7 36	23 17	9 25	16 35	11 7	7 2	1 14	5 19	1 50	10 45	22 36	9 39
21	4 56	18 8	8 1	22 16	9 36	15 36	11 9	7 49	1 16	5 26	1 51	10 49	22 36	9 40
26	4 59	18 31	8 27	20 59	9 48	14 35	11 11	6 34	1 17	5 32	1 51	10 52	22 36	9 41

JUNE.—WHITEBAIT FISHING OFF GREENWICH.

NOTES ON NATURAL HISTORY.—JUNE.

The month of June is one of the most cheerful in the year, for in it all nature seems in full enjoyment of the delights of summer before the oppressive heat of July and August is felt. In every direction crowds of young birds are trying their wings in short flights, chirping and twittering to each other, as though they were talking of the wonderful feat they were accomplishing, in venturing for the first time to fly alone. The blackcap hatches its young about this period, and it

BLACKCAP WARBLER.

seems particularly partial to gardens and orchards; where, during the whole period of incubation, it makes the air resound with its harmonious notes. It has usually a full, sweet, and yet deep and loud song, and it expresses such a great variety of modulations, as to exceed every other bird in that respect, except the nightingale. One of its notes is a particularly long, soft shake, which sinks gradually into the lowest strain, though every note is perfectly distinct; till, just as it is dying away, the cadence rises and swells into a full burst of loud and joyful melody. When the blackcap sings, its throat is wonderfully distended, and its little body apparently quivers with intense delight. The nest of this bird is generally placed in some low bush or shrub, and it is built in a very firm and compact manner. The eggs are four or five in number, of a pale reddish brown, mottled with spots of a darker hue. The blackcap is very fond of ivy berries, and generally makes its nest in an ivy bush, when one is to be met with not too high from the ground. Large flocks of young redstarts are frequently seen at this season, and they attract attention by their splendid plumage of grey, red, and black. The redstart is very fond of building in crevices in old walls, or in vases, or broken parts of statues, or any architectural ornament which may be placed in a garden. "If we visit, in the summer season," says Mr. Slaney, "any one of those old castles or monastic ruins, which give so much additional interest to many parts of our country, whilst the daws respond to each other with their appropriate melancholy call, as we walk round the ruined walls and fallen fragments, this elegant bird will often flit before us; and, standing on a broken battlement or moss-grown pillar, shake his bright plumage, as if in triumph over the works of man!" It is said that when the redstart first arrives in spring, it mounts to the top of the loftiest tree, where it will sit and sing for hours, beginning at daybreak. The song of this bird is short, and not very striking, but it will sing at night as well as in the daytime, and may be taught any tune that is whistled to it. The redstart is an active and restless bird, and, when singing, it shakes its tail with a rapid and tremulous motion.

YELLOW BIRD'S-NEST.

The flowers of June comprise all the most beautiful of the floral world. There are, however, some plants which are common and even beautiful, but yet are comparatively little known; and the most remarkable of these are the different kinds of parasites, such as the dodder, the mistletoe, the bird's-nest, and several others. Of these parasites, the mistletoe is, perhaps, the most common. It grows on various kinds of trees, particularly on the hawthorn and the apple; and, though but very rarely, on the oak. It is said that when the Druids consecrated a grove of oak-trees, they always planted an apple orchard near it, in order that there might be a chance of the mistletoe spreading from the apple-trees to the oaks. When the Druids found the mistletoe growing on the oak, they went in solemn procession to cut it, which was always done with a golden knife, and the mistletoe was received in a piece of white linen, that had never been used for any other purpose. The Saxons, also, revered the mistletoe; and the following curious legend is related in the "Edda" respecting it. Balder (the Saxon Apollo) wishing to visit earth, Friga, his mother (the Saxon Venus), was so afraid that some accident would happen to him, that she made everything that belonged to the earth, the air, or the water take an oath not to injure him. Unfortunately, however, she forgot the mistletoe, which belongs neither to the earth, nor the air, nor the water; and the evil spirit Loke, who wished to destroy Balder, killed him with a large branch of mistletoe. All nature was instantly overwhelmed with grief for the loss of the god of the sun; but at the end of three months, Thor (who was the Jupiter of the Saxons) restored Balder to life and placed the mistletoe under the sole control of Friga, that it might never injure her again. It was probably from the mistletoe being dedicated to the Saxon goddess of love, that it is hung up at Christmas, in country places, for people to kiss under. It was formerly supposed that the mistletoe could not be sown, but it is now found that a berry may be inserted in a crack in the bark of a tree, and then, if a piece of oiled paper be tied loosely over it, to preserve it from the birds, it will germinate.

Occasionally fields of clover are covered all over with a curious twining plant, which binds the stems together, and withers the leaves. The plant itself is pretty, from its pink stems, which twine together like a number of threads, and its elegant little flowers, which are also pinkish; but it is a most destructive weed, and destroys everything it takes hold of. It grows at first from the ground, but as soon as it has twisted itself round any unfortunate plant, it detaches its root from the earth, and draws all its nourishment from the plant it has taken hold of, and which it soon destroys. The yellow bird's-nest (*Monótropa Hypópithys*) only vegetates on the roots of beech and fir-trees, and seems very seldom to perfect its seeds, which may account for the comparative scarcity of the plant. It has no leaves, but their place is supplied by brownish scales. The flowers are of a dingy yellow, at first all drooping on one side, but becoming erect in maturity. When dry the flowers smell like those of the common primrose; and they appear in June and July.

In June insects are most abundant of every kind and description, as some are just bursting into the perfect state, while others are caterpillars or pupæ. It is, indeed, almost impossible to enumerate them.

> Though numberless these insect tribes of air,
> Though numberless each tribe and species fair,
> All have their organs, arts, and arms, and tools,
> And functions exercised by various rules.
> Their peaceful hours the loom and distaff know
> But war, the force and fury of the foe,
> The spear, the falchion, and the martial mail,
> And artful stratagem, where strength may fail.—HENRY BROOKE.

Of all the stratagems employed by insects, perhaps the most curious are those of the ant-lion (*Myrmèleon*). This insect in the larva state bears considerable resemblance to the wood-louse; and, as Messrs. Kirby and Spence observe, "if we looked only at its external conformation and habits, we should be apt to conclude it one of the most helpless animals in the creation. Its sole food is the juices of other insects, particularly ants; but, at the first view, it seems impossible that it should ever secure a single meal. Not only is its pace slow, but it can walk in no other direction than backwards; you may judge, therefore, what would be such a hunter's chance of seizing an active ant. Nor would a stationary posture be more favourable; for its grim aspect would infallibly impress upon all wanderers the prudence of keeping at a respectful distance." In this helpless condition instinct teaches the ant-lion to accomplish by artifice what it would otherwise have been quite unequal to. The female generally lays her eggs in a loose sandy soil, so that as soon as the larva is hatched it finds itself in the situation most suitable to it. Its first effort is to trace in the sand a circle; and this being done with wonderful exactness, it proceeds to excavate the cavity by throwing out the sand. "Placing itself in the inside of the circle which it has traced, it thrusts the hind part of its body under the sand, and with one of its fore-legs serving as a shovel, it charges its flat and square head with a load, which it immediately throws over the outside of the circle with a jerk strong enough to carry it to the distance of several inches." Walking backwards, and constantly repeating this process, it soon arrives at the part of the circle from which it set out. It then traces another furrow in the same manner, and then others, till it has excavated a conical hole rather more than two inches deep, about three inches wide at the top, and contracting to a point at the bottom. In the course of its labours, the ant-lion frequently meets with small stones, which it places on its head one at a time, and jerks off over the margin of the pit. If, however, the stone is too large, it contrives with great difficulty to get it on its back, and, keeping it in a "steady position by an alternate movement of the segments which compose that part, it carefully walks up the ascent with its burthen, and deposits it on the outside of the margin. When, as occasionally happens, the stone is round, the labour becomes more difficult and painful; and a spectator, watching the motions of the ant-lion, feels an inexpressible interest in its behalf. He sees it, with vast exertion, elevate the stone, and begin its arduous retrograde ascent: at every moment the burthen totters to one side or the other: the adroit porter lifts up the segments of its back to balance it, and has already nearly reached the top of the pit, when a stumble or a jolt mocks all its efforts, and the stone tumbles headlong to the bottom. Mortified, but not despairing, the ant-lion returns to the charge—again replaces the stone on its back—again ascends the side, and artfully avails itself, for a road, of the channel formed by the falling stone, against the sides of which it can support its load." In this manner it frequently tries without success, renewing its efforts again and again, till at last it either succeeds or abandons the hole in despair. When all is finished, the ant-lion buries itself in the sand at the bottom of its pit, only leaving exposed its two large horn-like forceps, with which it seizes its prey. No sooner does an ant or any other insect approach the edge of the cleverly-contrived slope, than the sand gives way, and the unfortunate insect, rolling to the bottom, is instantly seized, and, if not sufficiently powerful to make any resistance, it is as instantly killed, and its body, after it has been sucked dry, is tossed by a jerk of the head of the ant-lion beyond the immediate boundary of the cavity. Sometimes, however, it happens that a large and vigorous winged insect—such as a wasp, a bee, or a beetle—tumbles headforemost into the pit; and, when this is the case, a tremendous battle ensues, and "the result at last is, that either the ant-lion is dragged out of its den, and stung to death, or dropped upon the ground, and left a prey to birds, or that the winged insect is maimed, disabled, drawn into the sand, and slain. If an insect incapable of flight, or from its situation unable to use its wings, but of larger size than the *Myrmèleon* deems it prudent at once to seize upon, chances to fall into the snare, it is overwhelmed in its attempts to reascend by repeated showers of sand, which its enemy directs upon it with unerring aim." The showers of sand are thrown up by the head of the insect, and it is astonishing the quantity it conveys each time, and the force and precision with which it hurls its ammunition on the foe.

THE ANT-LION.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Morning.	MOON. Height above horizon	MOON. Sets. Morning.	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	M	[Visit. B.V. M.	3 49	3 23	61¾	8 18	11 49	4 57	32¼	10 37	21	6 5	6 25	182
2	Tu	Ox. Act. & C. co.	3 49	3 35	61½	8 17	Morning.	5 41	36½	11 45	☾	6 50	7 10	183
3	W	Dog Days begin	3 50	3 46	61½	8 17	0 10	6 26	41	Afternoon	23	7 40	8 5	184
4	Th	*Trans. St. Martin*	3 51	3 57	61½	8 16	0 35	7 13	45½	2 5	24	8 40	9 15	185
5	F	Camb. Term ends	3 52	4 8	61¼	8 16	1 0	8 3	49¾	3 20	25	9 45	10 15	186
6	S	Ox. Term ends	3 53	4 18	61¼	8 15	1 30	8 56	53½	4 35	26	10 50	11 20	187
7	S	6TH S. aft. TRIN.	3 54	4 28	61¼	8 15	2 7	9 53	56½	5 49	27	11 50	No Tide	188
8	M	Fire Insur. duc	3 55	4 38	61	8 14	2 54	10 54	58¼	7 0	28	0 20	0 50	189
9	Tu	Antares souths 9h 10m P.M.	3 56	4 47	61	8 14	3 50	11 57	58½	8 0	○	1 15	1 40	190
10	W	Alpha Herculis souths 9h 24m P.M.	3 57	4 56	60¾	8 13	5 0	Afternoon	57¼	8 52	1	2 6	2 30	191
11	Th	*Old St. Peter*	3 58	5 5	60¾	8 13	6 15	2 1	54½	9 39	2	3 0	3 25	192
12	F	Alpha Ophiuchi souths 10h 6m P.M.	3 59	5 13	60½	8 12	7 35	2 59	50½	10 7	3	3 50	4 10	193
13	S	Alpha Lyræ souths 11h 6m P.M.	4 0	5 21	60¼	8 11	8 56	3 53	46	10 36	4	4 35	5 0	194
14	S	7TH S. aft. TRIN.	4 1	5 28	60¼	8 10	10 13	4 44	41¼	11 2	5	5 25	5 50	195
15	M	*St. Swithin*	4 2	5 34	60	8 9	11 28	5 33	36½	11 26	☽	6 15	6 40	196
16	Tu	Beta Lyræ souths 11h 7m P.M.	4 3	5 40	60	8 8	Afternoon	6 21	31¾	11 52	7	7 5	7 30	197
17	W	Length of day 16h 3m	4 4	5 46	59¾	8 7	1 50	7 8	27¾	Morning.	8	8 0	8 30	198
18	Th	Gamma Aquilæ souths 11h 53m P.M.	4 5	5 51	59½	8 6	2 58	7 55	23¾	0 16	9	9 5	9 35	199
19	F	Alpha Aquilæ souths 11h 53m P.M.	4 6	5 55	59½	8 5	4 3	8 42	21½	0 44	10	10 10	10 40	200
20	S	*St. Margaret*	4 7	5 59	59¼	8 4	5 5	9 30	19½	1 15	11	11 15	11 50	201
21	S	8TH S. aft. TRIN.	4 9	6 2	59	8 3	6 0	10 18	18½	1 52	12	No Tide.	0 20	202
22	M	*Magdalene*	4 10	6 5	58¾	8 2	6 51	11 7	18½	2 34	13	0 45	1 10	203
23	Tu	Beta Aquilæ souths 11h 43m P.M.	4 11	6 7	58¾	8 0	7 33	11 55	19½	3 25	14	1 35	1 55	204
24	W	Alpha Herculis souths 9h 0m P.M.	4 12	6 9	58¼	7 58	8 10	Morning.	—	4 19	●	2 15	2 30	205
25	Th	*St. James*	4 14	6 10	58¼	7 56	8 42	0 41	21¼	5 17	16	2 50	3 10	206
26	F	*St. Anne*	4 15	6 10	58	7 54	9 9	1 27	23¾	6 19	17	3 25	3 40	207
27	S	Alpha Ophiuchi souths 9h 7m P.M.	4 17	6 10	57¾	7 53	9 32	2 12	27	7 24	18	3 55	4 15	208
28	S	9TH S. aft. TRIN.	4 19	6 10	57½	7 51	9 54	2 56	30¾	8 29	19	4 30	4 45	209
29	M	Length of night 8h 31m	4 21	6 8	57¼	7 50	10 16	3 39	34¾	9 34	20	5 5	5 20	210
30	Tu	Alpha Lyræ souths 9h 59m P.M.	4 23	6 6	57	7 49	10 39	4 23	38¼	10 41	21	5 40	5 55	211
31	W	Day dec. 1h. 12m.	4 24	6 4	56¾	7 47	11 2	5 8	43¾	11 49	22	6 15	6 40	212

DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h. After Sunset. O'Clock. 9h. 10h. 11h.

JULY.

The Sun is situated N. of the Equator, and is moving south. On the 23d day, at 6h. 53m. A.M., he passes from the sign Cancer to Leo (the Lion), having been in the former sign 31 days, 10 hours, and 53 minutes. He rises on the 19th at N.E. by N., and sets at N.W. by N. On the 3rd day, his distance from the earth is 96,592,000 miles, being the greatest in the year.

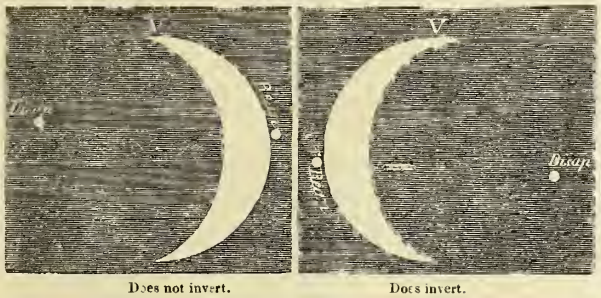
The Moon passes into Cetus near midnight on the 1st, and moves near the boundaries of this constellation, and those of Pisces and Aries, till the 5th. After noon on this day she enters Taurus, crosses the Milky Way on the 8th, and enters Gemini; she passes into Cancer on the 10th, Leo on the 11th, Virgo on the 13th, Libra on the 17th, Ophiuchus on the 19th, Sagittarius on the 21st, Capricornus on the 24th, Aquarius on the 26th, Pisces on the 27th, and Cetus on the 29th.

She is above the horizon when the Sun is below, during the morning hours for a few days at the beginning, and for several days at the end of the month, and during the evening hours from the 11th to the 25th.

She is on the Equator on the 2nd, at her extreme north position on the 9th, on the Equator again on the 15th, at her extreme south position on the 22nd, and a third time on the Equator on the 30th.

She is near Saturn on the 3rd; Uranus, on the 4th; Mercury, on the 8th; Venus, on the 11th; Mars, on the 12th; Jupiter, on the 13th; Saturn, on the 30th; and Uranus, on the 31st.

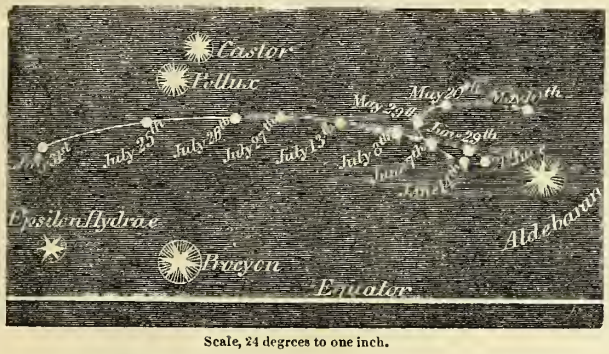
OCCULTATION OF MARS BY THE MOON, JULY 12, 1850, AS SEEN THROUGH A TELESCOPE WHICH



The disappearance will take place at the unillumined limb of the Moon, and the reappearance at the illumined limb, the former at 5h. 28m. P.M., and the latter at 6h. 33m. P.M.: at these times the Sun is above the horizon, and, therefore, these phenomena cannot be seen without the assistance of a telescope.

Mercury is in the constellation Taurus till the 9th, in Gemini from the 10th to the 24th, and in Cancer after the 25th.

PATH OF MERCURY FROM MAY 10 TO JULY 31, 1850.



Scale, 24 degrees to one inch.

He is a morning star, and rises on the 1st at 2h. 45m.; on the 10th, at 2h. 35m; on the 20th, at 3h. 2m; and on the last day, at 4h. 14m. His times of rising precede those of sunrise by 1h. 4m. on the 1st; by 1h. 22m. on the 10th, 11th, and 12th; by 1h. 21m. on the 13th; by 1h. 5m. on the 20th; and by 10m. on the last day. He rises throughout the month a little north of the N.E. by N. point of the horizon. He moves eastward among the stars during the month, is at his greatest west elongation on the 4th, is near the Moon on the 8th, and is in superior conjunction with the Sun on the last day. His motion among the stars is shown in the preceding diagram, and his telescopic appearance this month is shown in December.

Venus is in the constellation Cancer till the 4th, and in that of Leo from the 5th.

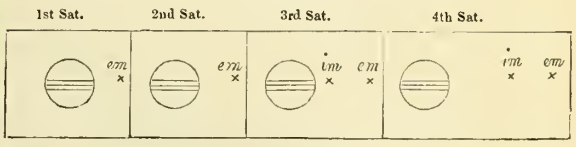
She is an evening star; and sets on the 1st, at 10h. 4m. P.M.; on the 15th, at 9h. 43m. P.M.; and on the last day, at 9h. 12m. P.M.; on the 16th at the W.N.W., and on the 31st at the W. by N. points of the horizon. She is moving eastward among the stars; is near the Moon on the 11th, Regnlus on the 16th, and Mars on the 31st. For her path among the stars see the diagram in next month.

Mars is in the constellation Leo throughout the month.

He is an evening star; and sets on the 1st at 10h. 37m. P.M.; on the 15th, at 9h. 56m. P.M.; and on the last day at 9h. 9m. P.M. He is moving eastward among the stars; is near Regulus on the 1st, the Moon on the 12th, and Venus on the last day. His altitude above the horizon, when he souths on the 1st, is 52°, and on the last day is 45°. For his path among the stars see the diagram in next month.

Jupiter is in the constellation Leo till the 29th, on which day he passes into Virgo. He sets on the 1st, at 11h. 15m. P.M.; and on the last day, at 9h. 26m. P.M., at the W. by N. point of the horizon. His altitude at the time of southing on the 1st is 41°⅔; and on the last day is 42°¾. He moves slowly eastward among the stars, and is near the Moon on the 13th. For his path among the stars during this month see the diagram in May.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Pisces throughout the month. He rises E. by N. on the 1st, at 9 minutes after midnight; on the 15th, at 11h. 11m. P.M.; and on the last day at 10h. 10m. P.M. After these times he is visible throughout the night. He souths at an altitude of 44°½ nearly. He is stationary among the stars from the middle of the month, and is near the Moon on the 3rd, and again on the 30th. (See the diagram in September).

Uranus is in the constellation Aries throughout the month. He rises on the 1st, at 0h. 15m. A.M.; and on the last day, at 10h. 15m. P.M. He is near the Moon on the 4th, and again on the 31st.

Neptune rises on the 1st, at 10h. 47m. P.M.; on the 15th, at 9h. 54m. P.M.; and on the last day, at 8h. 48m. P.M.

ON THE APPARENT MOTIONS OF THE SUN, MOON, AND PLANETS.

(*Continued from page* 17.)

to fall daily behind the stars. If we observe the altitude of a gronp of stars above the eastern horizon at sunset, we shall find, on examining the position of the same stars a few days afterwards, that its elevation is increased, and that it has approached towards the meridian. After an interval of three months, the same gronp of stars would be on the meridian at the time of sunset; and, after this time, it will continue to advance nearer to the Sun, till it is lost in his splendour. After being invisible for some time, it will become visible in the morning, and situated westward of the Sun; and day by day this distance will increase, till, at the end of the year from the time of the first observation, their relative positions will be the same as on the first examination.

The path of the Sun will be seen, by referring to our monthly account, to be continuons in one direction, and oblique among the stars. About the 21st of March, the Sun is situated on the Equator; and, after this time, his north declination and his altitude above the horizon when southing, increase day by day (see the Calendar pages), till about June 22, when he reaches his greatest north

(*Continued on page* 33.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury Morning.	Venus. Afternoon	Mars. Afternoon	Jupiter. Afternoon	Saturn. Morning.	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 34	2 15	3 22	4 36	6 42	4 0
6	10 33	2 19	3 14	4 19	6 23	3 40
11	10 41	2 23	3 6	4 2	6 4	3 20
16	10 57	2 26	2 58	3 46	5 46	3 0
21	11 18	2 29	2 49	3 29	5 26	2 41
26	11 43	2 31	2 41	3 12	5 7	2 21
31	Aftern.	2 33	2 33	2 56	4 48	2 1

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Emersion.			Eclipses of 2nd Sat. Emersion.		
D.	H.	M.	D.	H.	M.
2	10	19 P.M.	6	8	40 P.M.
18	8	37 P.M.			

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
Mars		12 5 28 P.M.	Dark	8° N. &
		12 6 33 P.M.	Bright	90° N.
65 Virginis	6	15 11 15 P.M. Below the horizon at the time of Emersion.	Dark	45° N. & 86° N.
21 Sagittarii	6	21 10 22 P.M.	Dark	70° N. &
		21 11 13 P.M.	Bright	69° N.
19 Capricorni	6	24 9 6 P.M.	Dark	36° N. &
		24 10 6 P.M.	Bright	72° N.

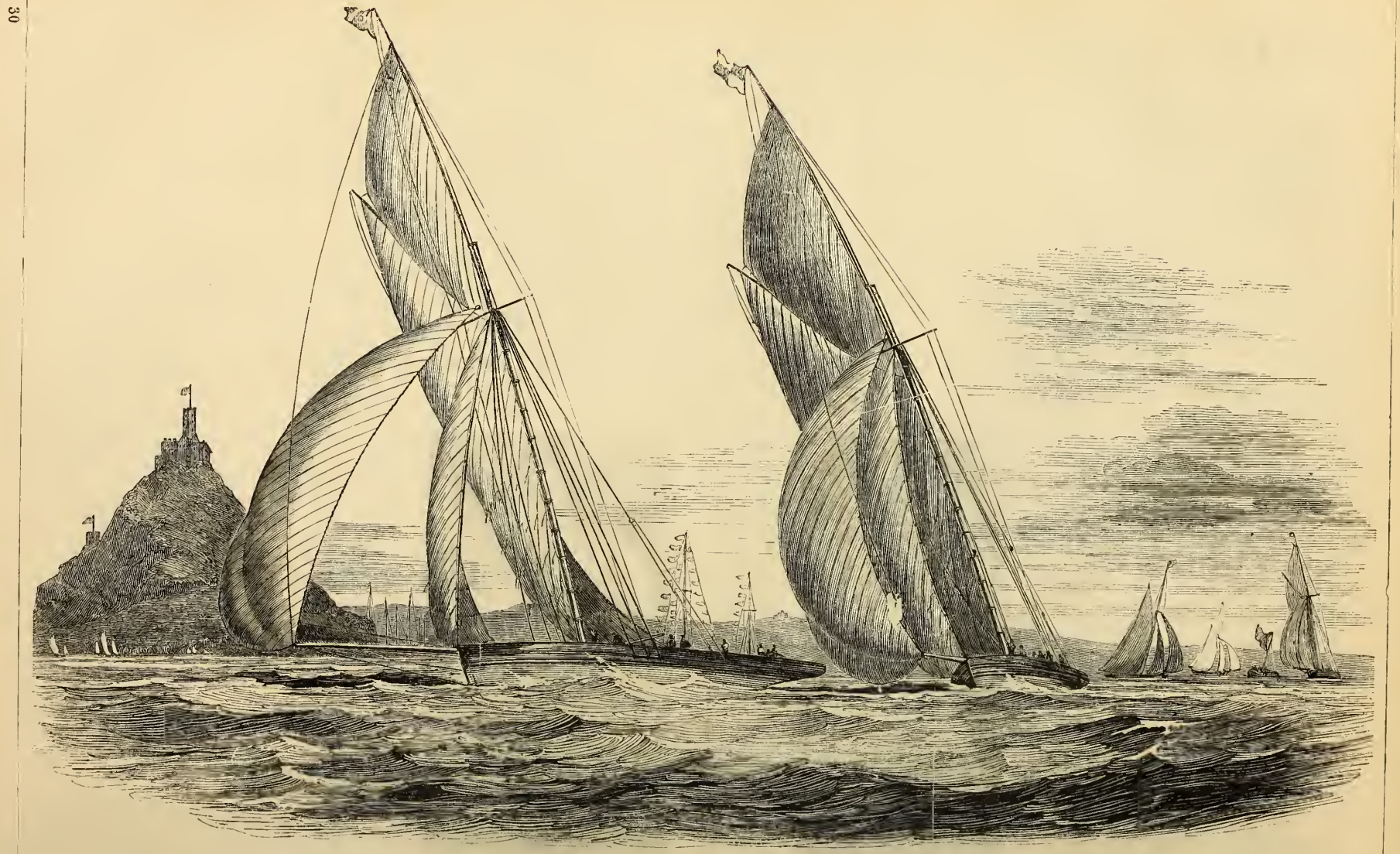
TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Last Quarter	2D.	5H.	58M	P.M.
New Moon ..	9	2	27	P.M.
First Quarter	16	6	41	A.M.
Full Moon	24	5	24	A.M.
Perigee ..	10	3		A.M.
Apogee ..	24	10		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination North.	VENUS. Right Ascension	VENUS. Declination North.	MARS. Right Ascension	MARS. Declination North.	JUPITER. Right Ascension	JUPITER. Declination North.	SATURN. Right Ascension	SATURN. Declination North.	URANUS. Right Ascension	URANUS. Declination North.	NEPTUNE. Right Ascension	NEPTUNE. Declination South.
1	5h.10m	19° 28′	8h.51m	19° 28′	9h.59m	13°31′	11h.14m	6° 18′	1h.18m	5° 37′	1h.52m	10° 55′	22h.36m	9°42′
6	5 30	20 44	9 16	17 44	10 11	12 26	11 16	6 1	1 19	5 41	1 52	10 58	22 36	9 43
11	5 57	22 1	9 39	15 48	10 22	11 18	11 19	5 43	1 20	5 45	1 53	11 0	22 35	9 45
16	6 33	22 53	10 2	13 43	10 34	10 8	11 22	5 24	1 20	5 47	1 53	11 2	22 35	9 47
21	7 14	22 59	10 25	11 29	10 45	8 57	11 25	5 4	1 21	5 49	1 53	11 3	22 35	9 49
26	7 58	22 0	10 47	9 9	10 57	7 44	11 28	4 43	1 21	5 50	1 54	11 4	22 35	9 51



JULY.—YACHTING OFF MOUNT'S BAY.

NOTES ON NATURAL HISTORY.—JULY.

Now comes July, and with his fervid noon
Unslnows labour. The tired mower sleeps;
The weary maid rakes feebly; the warm swain
Pitches his load reluctant; the faint steer,
Lashing his sides, draws sulkily along
The slow encumber'd wain in midday heat.

In July the heat of the weather has generally become so oppressive that all nature appears languid; the very birds are nearly all silent, and only the robin and the wren, with some very few exceptions, continue to sing at all after the first fortnight in July. The birds that are heard at this season generally, indeed, sound strange and unnatural. The cliff-chaff, which at other times only repeats the shrill and monotonous two notes which have gained it its name, was heard by Mr. Jenyns, in July, to utter a singular kind of whistle, which it repeated several times in succession. Nearly all the young birds are hatched at this season; but Mr. Jenyns informs us he has found the nest of the tree-pipit (or, more probably, the meadow-pipit) on the grass as late as the middle of July. The tree-pipit, or titlark, is a kind of lark, the male bird of which has a very agreeable song; though, as Mr. Yarrell observes, "it is perhaps more attractive from the manner in which it is given than the quality of the song itself. He generally sings while perched on the top of a bush, or one of the upper branches of an elm tree standing in a hedge-row, from which, if watched for a short time, he will be seen to ascend on quivering wing about as high again as the tree, then, stretching out his wings and expanding his tail, he descends slowly by a half-circle, singing the whole time, to the same branch from which he started, or to the top of the nearest other tree; and so constant is this habit with him, that, if the observer does not approach too near so as to alarm him, the bird may be seen to perform this same evolution twenty times in half an hour." The titlarks walk on the ground, like the wagtails and the larks. The meadow-pipit is smaller than the other species; and, instead of singing on a tree, it places itself on a little hillock or a large stone, and moves its tail up and down like a wagtail. This bird always builds in the grass, and lays a little dried grass over its nest to conceal it. The rock-pipit inhabits low flat shores near the sea, "where it feeds on marine insects, sometimes seeking its food close to the edge of the retiring tide;" and sometimes busily engaged in turning over and examining sea-weed, apparently in search of small crabs or other similar crustacea.

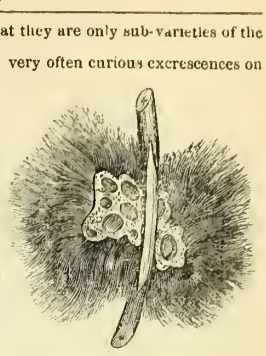
July is the month for gathering the leaves of the woad (*Isàtis tinctòria*). It is cultivated, as its leaves are applied in dyeing thread, in some parts of England; but that which is used for dyeing cloth is brought principally from the Canary Islands and Spain and Sicily. It was formerly grown in great abundance in the south of Somersetshire; and it is said that the name of Glastonbury is derived from the Celtic word *glas*, blue. The ancient Britons are reported to have painted their bodies with the blue obtained from this plant, and hence they received their name, as *Britho* is the Celtic word for to paint. The plant is a biennial, and the seeds that are sown in the July of one year produce leaves in the July of the following year in a fit state for using. When the leaves are gathered, they are steeped in water till all the fleshy matter is separated from the fibrous part; the pulp is then suffered to ferment, and the water being partly strained and partly evaporated from it, the substance, when dry, is cut into pieces about an inch square, and packed in casks or sacks for sale. It is principally used for dyeing woollen substances not only blue, but black; as all the black cloth that is made is dyed blue before it is dyed black, to prevent it from turning brown. The woad, though used in dyeing blue, has yellow flowers, which are rather ornamental. It is now comparatively very little cultivated, as it requires a very rich soil to bring the leaves to perfection; and, unless they are fleshy and succulent, they produce very little colouring matter. On this account its cultivation is so expensive, that indigo, which is produced from the leaves of the *Indigófera* (a leguminous plant growing in the East Indies), can be obtained more cheaply, and it is, therefore, generally preferred.

WOAD.

Cruciferous plants, such as the wild cabbage, the wild turnip, and the wild mustard, are generally in flower in this month; and, as their flowers are usually yellow, they give a peculiarly gay and cheerful appearance to the hedge-rows and road-sides at this season. All the cruciferous plants are edible, and though some of them are very pungent, they are far from disagreeable to the taste, and are generally considered very wholesome. They are all known by their flowers consisting of four petals, disposed in the form of a Greek cross. The umbelliferous plants, on the other hand, which are known by their flowers forming large heads, like the parsley and the meadow-sweet, are nearly always poisonous when in a wild state; though they are rendered edible, and even wholesome, by cultivation. The celery and the carrot are striking examples of this. The celery is poisonous in a wild state; and its stalks are tough and leathery. The wild carrot has a root so slender that it was at first thought it was scarcely possible to be the same plant as that cultivated in gardens. M. Vilmorin, however, of Paris, contrived, by cultivating the wild plant and raising several generations from its seeds, to obtain carrots fit for the table. In this way, no doubt, many of our popular vegetables have been introduced, of which the origin now is totally unknown. As a proof of the wonders which may be effected by cultivation, it may be mentioned that all the kinds of cabbage, greens, broccoli, and cauliflower have been raised from the same stock, and that they are only sub-varieties of the same species.

At this season of the year, rose-trees have very often curious excrescences on the branches, which look like a tufted lichen, and to which the old naturalists gave the name of *bedeguar*. These excrescences consist of numerous reddish, moss-like fibres, quite dissimilar from the leaves of the plant, and each excrescence is sometimes the size of a hen's egg. When cut open, it will be found that the centre of this hairy mass consists of from ten to a dozen cells all growing together, each containing the maggot of a kind of gnat (*Cýnips*). This gnat, or gall-insect, pierces the bark of the rose-tree with its ovipositor, and lays its eggs just within the bark, or, rather, in the soft parts of the plant, and these having their juices interrupted, bulge out into a kind of tumour; while the bark, separating into its woody fibres, forms a kind of fringe, which covers the tumour. The perfect insect is a most fearful-looking gnat. Gnats are at this season very abundant. The month of July is generally remarkably moist, and as it is also warm, it is very favourable to the increase of these creatures, who have been always observed to bite most in the warm moist weather.

LARVA AND PERFECT INSECT OF THE EGLANTINE GALL.



INTERIOR OF THE GALL ON THE EGLANTINE.

There is a species of gnat common in Hungary (*Simúlia columbaczénsis*), which, though so minute as to be scarcely perceptible without a powerful microscope, is yet so extremely destructive that it will kill a large horse or cow in a few hours. In some years these gnats fill the atmosphere so completely, that, as Kollar tells us, "it is impossible to breathe without swallowing a great number of them. Not unfrequently they appear in so dense a multitude as to be taken at a distance for a cloud, and in this form they are most to be feared. On the appearance of these clouds the herds instinctively leave their pastures, and fly to the villages to take refuge in their stables from these bloodthirsty insects. Horses, oxen, and swine generally suffer the most from them. When these flies attack any of the above-named animals, they select the tender soft parts, free from hair. Hence, they attach themselves mostly to the corners of the eyes, the mouth, the nostrils, and even creep into the ears and the inner nostrils, the throat and wind pipe, &c., where they are sometimes found in animals killed by them, in thick layers. Men are no less exposed to the attacks of these scourges than domestic animals; but they can more readily drive them off, and by covering the face secure themselves from the most dangerous consequences. Solitary examples also are not wanting where little children have been killed by them, when the mother, to pursue her work, has left her babe lying in the grass, or suspended in its swing to the branch of a tree, and staid away too long. Every bite given by this insect to men or cattle causes a burning itching, and a very painful, hard, rapid swelling, which scarcely goes off in eight or ten days. Many of them, particularly when they are near together, cause a violent inflammatory fever, and in sensitive bodies cramps and convulsions. For a long time the appearance of this destructive gnat was a dark riddle to the inhabitants of the country. All sorts of conjectures were made about its origin. The inhabitants of the neighbourhood of Columbacz, in Servia, the native locality of these flies, assert that the caves in the limestone mountains, near the ancient Castle of Columbacz, are their real birth-places, as they have been seen to issue from the mouths of these caves in the form of a thick smoke. This opinion is universal in the Bannat, and is particularly maintained by the Wallachians, who add that the dragon killed by St. George is buried in one of these caves, and that these hurtful insects, as well as many other poisonous animals, are hatched in its jaws." Some of these gnats were brought to England in the summer of 1847, and exhibited at a meeting of the Entomological Society.

One of the most destructive insects at this season of the year is the raspberry beetle (*Derméstes*, or *Bytùrus, tomentòsus*). "Many of the raspberries," says Mr. Westwood, "may now be perceived more or less shrivelled, with the seed-vessels dried up. If one of these be opened, the central core of the fruit will be found more or less burrowed, as well as the fruit itself, the seeds of which are left bare and dry, especially at the top, the remainder not being full-sized, and generally prematurely ripe and discoloured. This is done by a whitish grub, of about a quarter of an inch long, and rather cylindric in figure; with the under side of the body and sides, and articulations of the segments, dirty white; the head and a dorsal plate on each ring brownish buff, with the sides and a central longitudinal line on each plate brown, thus giving the appearance of three dorsal lines of brown. The head is horny, and furnished with horny jaws and short feelers, as well as with the various membranous parts usually present, composing the under portions of the mouth of the larvæ of *Coleóptera*. The grub is also furnished with six short, scaly, articulated feet. It has also two short scaly horns on the upper side of the extremity of the body, the under side being furnished with a fleshy retractile tubercle, which the insect uses as a seventh foot. When full grown it descends to the earth, where it buries itself to a considerable depth, forming for itself a small oval cocoon of earth, with the inner surface quite smooth. Here it assumes the ordinary pupa state, to which all coleopterous insects are subject." The perfect insect is a small, buff, or slaty-brown, oval beetle, about one-sixth of an inch long, with knobbed antennæ, which is to be seen flying about the raspberry plants in summer, and which is sometimes also found on the hawthorn and the blackberry.

The bloody-nose beetle (*Chrysomèla tenebricòsa*) is so named from its having always, when alarmed, a clear drop or two of red fluid hanging from its mouth. This fluid it ejects, when taken, upon the hands of its capturers; and as, from the sharp pain it occasions, it frequently makes the holder start, the insect falls to the ground, and, of course, loses no time in making its escape. Other species of the same genus eject a white fluid, which is somewhat glutinous, and which enables them to adhere, when necessary, to the branches or leaves of trees. These beetles, indeed, and the ground beetles, to which they are very nearly allied, are remarkably expert climbers, and they will not only run up trees and along the branches of trailing plants, but they will occasionally walk with their backs downwards, adhering so firmly that it requires a tolerably strong pull to disengage them. Sometimes, the effect of a warm sunny day in February is astonishing upon the beetles which are hybernated, and they come out of their holes in such numbers, as to make one wonder where they can possibly have been hidden.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises	SUN. Souths. After 12 o'Clock.	SUN. Height above horizon	SUN. Sets	MOON. Rises. Afternoon	MOON. Souths. Morning.	MOON. Height above horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	D. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Th	Lammas Day	4 25	6 1	56½	7 46	11 29	5 55	48	1 1		☾		7 40	7 25	213
2	F	Length of day 15h 18m	4 26	5 57	56¼	7 44	Morning.	6 45	51¾	2 14		24		7 55	8 20	214
3	S	Length of night 8h 44m	4 28	5 53	56	7 42	0 2	7 39	55¼	3 27		25		9 0	9 35	215
4	S	10TH S. aft. TRIN.	4 30	5 48	55¾	7 41	0 43	8 36	57½	4 37		26		10 10	10 45	216
5	M	[figuration	4 31	5 43	55½	7 40	1 36	9 37	58½	5 43		27		11 25	At Midnight	217
6	Tu	Pr. Alfred b. Trs-	4 33	5 37	55¼	7 38	2 35	10 39	58	6 38		28		No Tide.	0 35	218
7	W	Name of Jesus	4 35	5 30	55	7 36	3 46	11 41	56	7 23		○		1 2	1 30	219
8	Th	Day breaks 1h 36m	4 36	5 23	54¾	7 34	5 6	Afternoon	52¾	8 2		1		1 55	2 20	220
9	F	[Q. Day	4 38	5 15	54½	7 32	6 28	1 39	48½	8 35		2		2 45	3 10	221
10	S	*St. Lawrence.* Hf	4 40	5 7	54	7 31	7 49	2 33	43½	9 2		3		3 35	3 55	222
11	S	11TH S. aft. TRIN	4 41	4 58	53¾	7 29	9 7	3 25	38¾	9 28		4		4 20	4 45	223
12	M	[Lam. Day	4 42	4 49	53½	7 27	10 24	4 15	33¾	9 54		5		5 5	5 25	224
13	Tu	Qu. Adel. b. Old	4 44	4 39	53¼	7 25	11 38	5 3	29¼	10 19		6		5 50	6 10	225
14	W	Alpha Lyræ souths 8h 59m P.M.	4 45	4 28	53	7 23	Afternoon	5 51	25½	10 46		☽		6 30	6 55	226
15	Th	As. of B. V. Mary	4 46	4 17	52½	7 21	1 55	6 39	22¼	11 17		8		7 20	7 45	227
16	F	Beta Lyræ souths 9h 5m P.M.	4 47	4 5	52¼	7 19	2 57	7 27	20	11 53		9		8 15	8 50	228
17	S	Duch. of Kent b.	4 49	3 53	52	7 17	3 55	8 15	18¾	Morning.		10		9 30	10 5	229
18	S	12TH S. aft. TRIN	4 51	3 40	51¾	7 15	4 48	9 4	18½	0 33		11		10 40	11 20	230
19	M	Gamma Aquilæ souths 9h 47m P.M.	4 52	3 27	51¼	7 13	5 32	9 51	19	1 26		12		11 55	No Tide.	231
20	Tu	Alpha Aquilæ souths 9h 47m P.M.	4 53	3 13	51	7 11	6 12	10 39	20½	2 12		13		0 25	0 50	232
21	W	Black-cock sh. b.	4 55	2 59	50¾	7 9	6 45	11 25	22¾	3 11		14		1 15	1 35	233
22	Th	Beta Aquilæ souths 9h 44m P.M.	4 57	2 44	50¼	7 7	7 12	Morning.	—	4 12		●		1 55	2 10	234
23	F	Alpha Cygni souths 10h 28m P.M.	4 59	2 29	50	7 5	7 37	0 10	26	5 15		16		2 30	2 45	235
24	S	*St. Bartholomew*	5 1	2 13	49¾	7 3	8 0	0 54	29½	6 20		17		3 5	3 20	236
25	S	13TH S. aft. TRIN	5 2	1 57	49¼	7 1	8 23	1 38	33½	7 26		18		3 35	3 50	237
26	M	Prince Albert b.	5 3	1 40	49	6 59	8 44	2 22	38	8 33		19		4 5	4 20	238
27	Tu	Beta Aquarii souths 11h 0m P.M.	5 5	1 24	48½	6 57	9 6	3 6	42¼	9 40		20		4 35	4 55	239
28	W	*St. Augustin*	5 7	1 6	48¼	6 55	9 33	3 52	46¾	10 50		21		5 10	5 30	240
29	Th	St. John Bap. beh	5 8	0 49	48	6 53	10 2	4 40	50¾	11 59		22		5 45	6 5	241
30	F	Alpha Aquarii souths 11h 23m P.M.	5 10	0 31	47½	6 51	10 38	5 31	54	Afternoon		☾		6 25	6 50	242
31	S	Twilight ends 8h 56m	5 12	0 13	47¼	6 49	11 22	6 25	56¾	2 21				7 15	7 45	243

AUGUST.

The Sun is situated north of the Equator, and is moving south. On the 23rd day, at 1h. 22m. P.M., he passes from the sign Leo to Virgo (the Virgin), having been in the former sign 31 days, 6 hours, and 49 minutes. He rises and sets on the 15th, at the E.N.E and W.N.W. points of the horizon respectively. On the 1st day his distance from the Earth is 96,392,000 miles.

On August 7th there will be an eclipse of the Sun, but which will be invisible in Europe. It will be visible for the most part at places situated between 20° south latitude, and 40° north latitude, and betweeu 130° and 300° east longitude. These portions of the Earth are principally occupied by the North Pacific Ocean, and the eclipse will be total at some parts of the ocean. It begins on the 7th at 7h. P.M. nearly, Greenwich time, at a place whose latitude is 11⅔° N., and whose longitude is 164° E.; and the eclipse ends on August 7th near midnight, Greenwich time, in latitude 10° S., and longitude 300° E.

The Moon, on the 1st, near midnight, enters Taurus. She crosses the Milky Way ou the 4th; enters Gemini on the 5th; Cancer on the 6th; Leo on the 8th; Virgo on the 10th; Libra on the 13th; Ophiuchus on the 15th; Sagittarius on the 17th; Capricornus on the 20th; Aquarius on the 22nd; Pisces on the 24th; Cetus on the 25th; and, till the 29th, she is alternately in Pisces, Cetus, and Aries; and enters Taurus on the 29th.

She is above the horizon when the Sun is below, during the morning hours, for a few days at the beginning of the month, and from the 14th to the 31st; and during the evening hours, from the 11th to the 25th.

She is north of the Equator at the beginning, and reaches her extreme north position on the 5th: then she moves south; is on the Equator on the 11th; at her extreme south position on the 18th; and again on the Equator on the 26th, going north.

She is near Mercury on the 8th; Mars, Jupiter, and Venus on the 10th; Saturn on the 26th; and Uranus on the 27th.

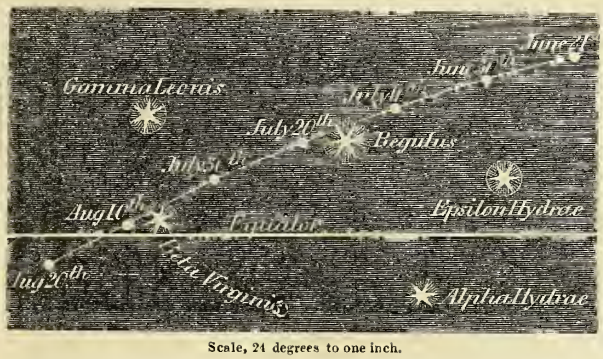
Mercury is in the constellation Cancer till August 3rd; in that of Leo from the 4th to the 23rd; and in Virgo from the 24th.

He is an evening star; and sets on the 1st, at 8h. 1m.; on the 15th, at 7h. 57m.; and on the last day, at 7h. 24m.: these times are 15, 36, and 35 minutes, respectively, after the Sun sets. Mercury sets on the 19th at the W. by N., and on the 29th at the W. point of the horizon. He moves eastward among the stars throughout the month; is near the Moon on the 8th, and Jupiter on the 28th. For his path in the heavens, see the diagram in September, showing a continuation of his motion from that exhibited in the diagram in June.

Venus is in the constellation Leo till the 3rd, and in that of Virgo from the 4th.

She is an evening star; and sets on the 1st, at 9h. 10m. P.M.; on the 15th, at 8h. 36m. P.M.; and on the last day, at 7h. 57m. P.M.; on the 13th at the W., and on the 27th at the W. by S. point of the horizon. She is moving eastward among the stars. She is near Jupiter on the 6th; Beta Virginis on the 8th; and Spica Virginis on the 31st. Her path in the heavens is shewn in the annexed diagram, and her telescopic appearance is shewn in December.

PATH OF VENUS FROM JUNE 21 TO AUGUST 20, 1850.

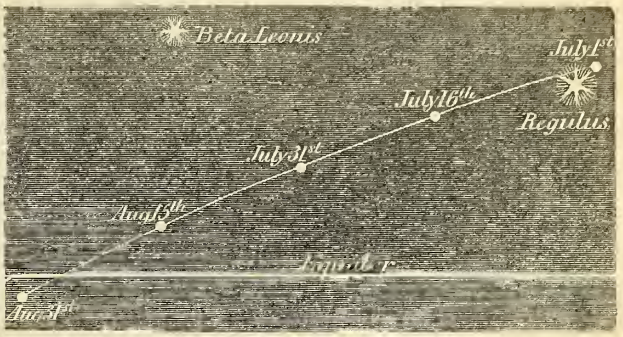


Scale, 24 degrees to one inch.

Mars is in the constellation Leo till the 9th, on which day he passes into Virgo.

He is an evening star; and sets, on the 1st., at 9h. 6m. P.M.; on the 15th, at 8h. 26m. P.M.; and, on the last day, at 7h. 37m. P.M. He is moving eastward among the stars; is near the Moon on the 10th, Jupiter on the 14th, and Beta Virginis on the 15th. His altitude above the horizon when he souths on the 1st is 44°¾, decreasing to 37° on the last day.

PATH OF MARS FROM JULY 1 TO AUGUST 31, 1850.

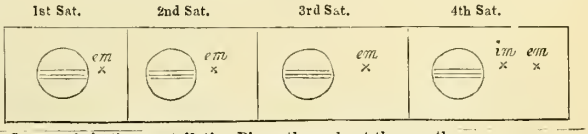


Scale, 12 degrees to one inch.

Jupiter is in the constellation Virgo throughout the month.

He sets, on the 1st, at 9h. 22m. P.M.; and, on the last day, at 7h. 35m. P.M.; near the W. by N. point of the horizon at the beginning of the month, and W. at the end. His altitude in southing is 42°¾ on the 1st, and is 40°½ on the last day. He moves slowly eastward among the stars; is near Venus on the 6th, the Moon on the 10th, Mars on the 14th, and Beta Virginis on the 17th. His path in the heavens is shewn in the diagram in May.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Pisces throughout the month.

He is visible during the greater part of the night; and rises near the E. by N.; on the 1st, at 10h. 6m. P.M.; on the 15th, at 9h. 10m. P.M.; and, on the last day, at 8h. 8m. P.M. He souths at an altitude of 44° nearly; is almost stationary among the stars throughout the month; and is near the Moon on the 26th. See the diagram in next month shewing his motion in the heavens.

Uranus is in the constellation Aries throughout the month.

He rises, on the 1st, at 10h. 11m. P.M.; and on the 31st at 8h. 13m. P.M., midway between the E. by N. and E.N.E. points of the horizon. He souths, on the 15th, at 4h. 2m. A.M., at an altitude of 49°¾. He is almost stationary among the stars, and is near the Moon on the 27th.

Neptune rises, on the 1st, at 8h. 44m. P.M.; on the 15th, at 7h. 48m. P.M.; and, on the 31st, at 6h. 45m. P.M., midway between the E. by S. and the E.S.E. points of the horizon.

ON THE APPARENT MOTIONS OF THE SUN, MOON, AND PLANETS.

(*Continued from page* 29.)

declination and his greatest meridian altitude. From this time, the north declination gradually decreases till about the 24th of September, when he is again on the Equator: he continues to move in the same direction till about the 22nd of December, when his greatest south declination is attained; after which his south declination gradually decreases till about the 21st of March. At the times of the vernal equinox on the 21st of March, and the autumnal equinox about the 24th of

(*Continued on page* 37.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus Afternoon	Mars. Afternoon	Jupiter Afternoon	Saturn. Morning	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	0 12	2 31	2 31	2 53	4 44	1 57
6	0 33	2 35	2 23	2 36	4 24	1 37
11	0 50	2 36	2 15	2 20	4 4	1 17
16	1 4	2 37	2 7	2 4	3 41	0 57
21	1 14	2 38	1 59	1 48	3 24	0 37
26	1 22	2 39	1 51	1 32	3 4	0 17
31	1 27	2 40	1 43	1 16	2 43	Afternoon.

JUPITER'S SATELLITES.

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H M.		
Gamma Tauri	3	3 0 39 A.M.	Bright	16° N. &
		3 1 25 A.M.	Dark	90° N.
Aldebaran	1	3 8 34 A.M.	Bright	8° N. &
		3 9 44 A.M.	Dark	81° N.
Gamma Libræ	4	14 8 30 P.M.	Dark	18° N. &
		14 9 41 P.M.	Bright	76° N.
Xi 1 Sagittarii	6	18 6 44 P.M.	Dark	15° N. &
		18 8 4 P.M.	Bright	69° N.
42 Aquarii	6	22 8 36 P.M.	Dark	6° N. &
		22 9 19 P.M.	Bright	72° N.

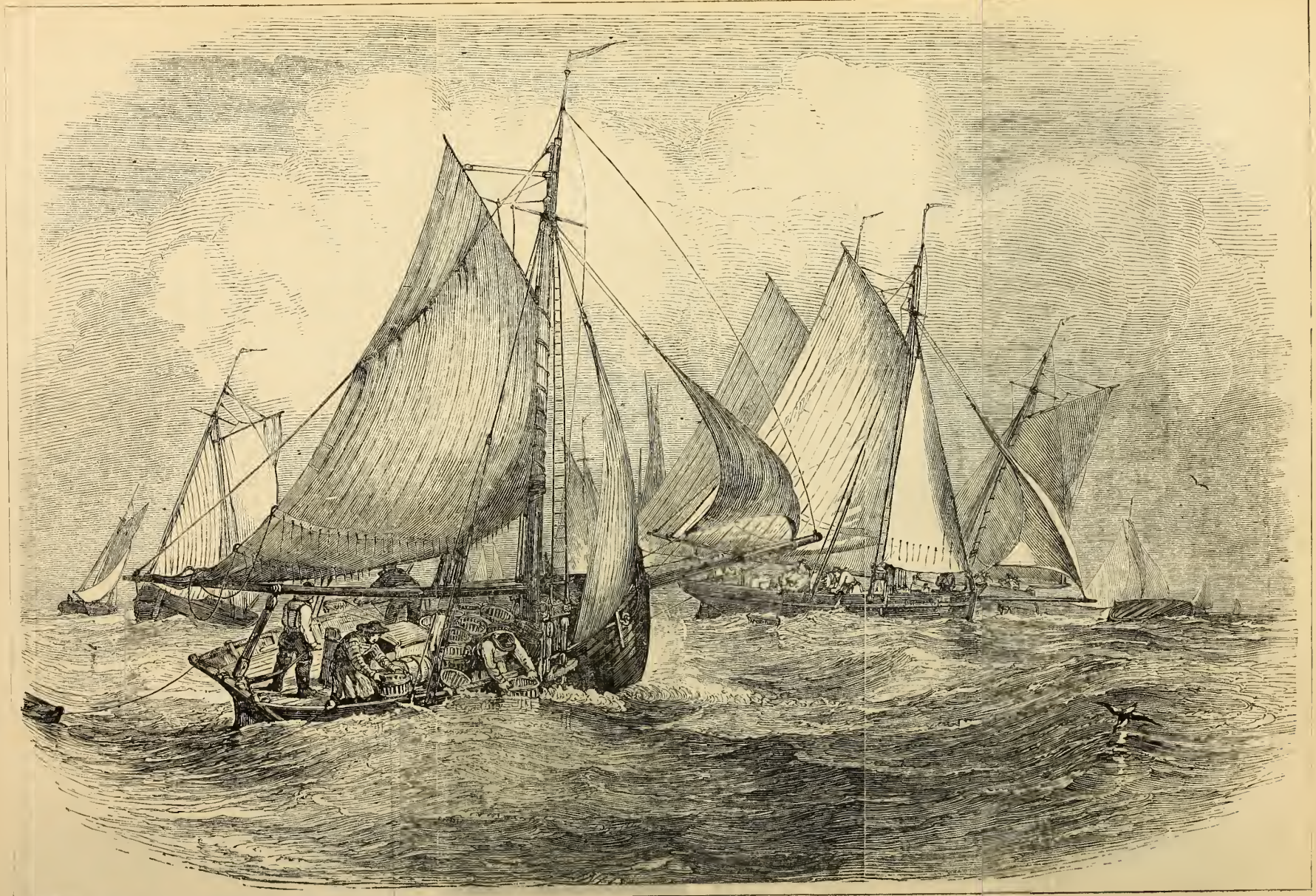
TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.	
Last Quart.	1	5	17	A.M.
New Moon ..	7	9	34	P.M.
First Quart.	14	5	46	P.M.
Full Moon	22	9	12	P.M.
Last Quart.	30	2	18	P.M.
Perigee ..	7	1		P.M.
Apogee ..	20	3		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month	Mercury. Right Ascension	Mercury. Declination North.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	8h. 51m	19° 27′	11h. 13m	6° 13′	11h. 10m	6° 14′	11h. 32m	4° 17′	1h. 21m	5° 49′	1h. 54m	11°5′	22h. 34m	9° 55′
6	9 32	16 29	11 34	3 42	11 22	4 58	11 35	3 54	1 21	5 48	1 54	11 5	22 34	9 57
11	10 9	13 4	11 55	1 9	11 33	3 41	11 39	3 31	1 21	5 45	1 54	11 5	22 33	9 59
16	10 42	9 26	12 15	South.	11 45	2 23	11 41	3 7	1 21	5 42	1 54	11 4	22 33	10 3
21	11 12	5 45	12 36	3 59	11 57	1 4	11 46	2 43	1 20	5 37	1 53	11 3	22 32	10 6
26	11 39	2 7	12 56	6 31	12 8	South.	11 50	2 18	1 20	5 32	1 53	11 1	22 31	10 9



AUGUST.—OYSTER DREDGING IN WHITSTABLE BAY

NOTES ON NATURAL HISTORY.—AUGUST.

In August very few birds are heard to sing. Even the robin and the wren are generally quiet from the middle of July till the middle of August, though the robin generally begins again to sing towards the end of the latter month. Occasionally a number of young birds, such as linnets, greenfinches, buntings, and other small birds, are seen flying together in large flocks like a swarm of bees, and seeming as though they were driven off by the old birds, though they are much too numerous to be the inhabitants of one nest; and when they fly, it is in a determined manner, "wending their way steadily in a direct line, as if under the influence of some common impulse." These flittings, also, do not appear to have anything to do with ordinary migrations, as they occur in species which do not migrate; and, in fact, it does not appear that there is any reason for their removal, unless it be that those particular kinds of birds have become, after the hatching of the young ones, too numerous for their original neighbourhood, from a deficiency of food, or some other cause; and hence they are driven forth to seek a new settlement.

Mr. Knapp says he has observed "a flock of finches and yellow-hammers basking in a hedge, and a hawk, after due consideration, apparently single out an individual. Upon its moving for its prey, some wary bird has given the alarm, and most of the little troop scuttle immediately into the hedge; but the hawk holds on its course, and darts upon a selected object. If baffled, it seldom succeeds upon another; and, so fixed are its eyes upon this one individual, that, as if unobservant of its own danger, it snatches up its morsel at our very sides A pigeon on the roof of a dove-cot seems selected from its fellows—the hawk rarely snatching at more than one terror-stricken bird. The larger species of hawks appear to employ no powers excepting those of wing, but pursue and capture by celerity and strength."

It has often been observed that we are surrounded by wonders which we do not notice, because they are of daily occurrence, but which excite the greatest surprise when they are pointed out to us. The truth of this observation is forcibly exemplified as regards fish. We see them every day exposed for sale on stalls, and we eat them frequently at our tables, without once considering by what a curious and delicate organisation these creatures are enabled to see and breathe in an element that carries death to us and to quadrupeds. The sight of fishes appears to be remarkably strong, as it is by sight chiefly that they discover their prey. Hence, a fish is easily deceived by an artificial fly, or the imitation of a frog or other small aquatic or amphibious animal; which, if it were guided by the smell, or any other sense than the sight, could not happen. The mode in which fishes breathe is, however, the most curious. They have no lungs; but, instead of them, they have gills, carefully covered with a lid and a flap, both of which the fish can open or keep closed at pleasure. The gills are composed of arches, bordered by a kind of fringe, which, when examined through a microscope, appears covered with a velvet-like membrane, "over which myriads of wonderfully minute blood-vessels are spread, like a delicate net-work. There are commonly four of these fringed arches: they are moveable, and allow the currents of water, driven down by the action of the mouth, to flow freely through them, so as to lave every fibril." It is absolutely necessary that this should be the case, since the gills lose their power of acting as soon as they become dry; and hence a fish cannot live long after it is taken out of the water. As there is danger, however, of the food taken by the fish being carried through the gills by the stream of water constantly flowing through them, the minor curve of the arch formed by the gills is studded with spines, which prevent anything but air or water passing through them.

FLOWERING FERN.

In the vegetable world, some plants are in flower at this season that are not met with at any other, and one of the most curious of these is the flowering fern (*Osmúnda regàlis*), a plant, the very name of which seems a contradiction, as it is well known that ferns have no flowers, in the usual acceptation of the word, and that they bear their seeds on the back of their leaves. The flowering fern resembles the other plants belonging to the family in not having any proper flowers, but it has its seed-vessels on only some of its fronds, or, rather, on what should have been some of its fronds; as the seed-vessels grow clustered together, without any of the cellular tissue belonging to the leaves being produced. Thus, the seed-vessels of the flowering fern, instead of being found, as in other ferns, on the back of the leaves, look as though the leaves had withered away from them. In the early part of the summer, these seed-vessels being of a pale green, are scarcely perceptible; but about autumn they take a rich brown colour and become very ornamental. These ferns are tolerably abundant, particularly in the north of England and in Scotland, where, in marshy places, they grow to a considerable size, sometimes having been known to be upwards of eleven feet high. The botanic name of the plant is said to allude to some Saxon King named Osmund, who adopted the flowering fern as his badge, in the same way as the broom, the common heath, and many other British plants, have been adopted as banners by several Highland clans. The underground or root-like stem of this plant is tonic, and is used in rustic medicine. The moon-wort, or grape fern (*Botrýchium Lunária*), is very nearly allied to the *Osmúnda*, as it produces naked seed-vessels; but it is much less ornamental. It takes its name of moon-wort from its leaflets being somewhat crescent-shaped. The adder's tongue (*Ophioglóssum*) is another fern which does not produce its seed-vessels on the back of the leaves, but in a close clustered spike, bearing considerable resemblance to a tongue. The adder's tongue is found in moist meadows and pastures in warm situations.

The sundew, or red rot, is the name of a singular genus of perennial British plants, which are found on heaths and commons where the soil is boggy. The leaves, which all spring from the roots, are covered with glandular hairs, from the extremities of which exudes a transparent but glutinous liquid, resembling drops of dew. The flowers are nearly white, and rather pretty. There are three species: the commonest kind has round leaves, but the long-leaved species (*Dróseralongifólia*) is the most ornamental. Ants and small flies are sometimes found adhering to the leaves, or entangled in the hairs, which, it is said, fold over them, and prevent the possibility of their escape; but it appears more probable that the insects are held fast by the glutinous liquid exuded from the hairs. "All the species of *Drósera* are acrid, and their juice is employed to destroy warts and corns." They are said to occasion the rot in sheep, but that probably arises from the unwholesome nature of the boggy land on which the plants grow.

LONG-LEAVED SUN-DEW.

The ants generally seen are little black creatures with long legs, large heads, and very slender bodies But these are only the working part of the community; and many people are probably not aware that, in the month of August, and sometimes later, "the habitations of the various species of ants may be seen to swarm with winged insects, which are the males and females, preparing to quit for ever the scene of their nativity and education. Every thing is in motion; and the silver wings, contrasted with the jet bodies which compose the animated mass, add a degree of splendour to the interesting scene. The bustle increases, till at length the males rise, as it were by a general impulse, into the air, and the females accompany them. The whole swarm alternately rises and falls with a slow movement to the height of about ten feet, the males flying obliquely, with a rapid zig-zag motion, and the females, though they follow the general movement of the column, appearing suspended in the air, like balloons, seemingly with no individual motion, and having their heads turned towards the wind." "Sometimes the swarms of a whole district," continue Messrs. Kirby and Spence, "unite their infinite myriads, and, rising with incredible velocity, in distinct columns, they soar above the clouds. Each column looks like a kind of slender net-work, and has a tremulous undulating motion, which has been observed to be produced by the regular alternate rising and falling just alluded to. The noise emitted by myriads and myriads of these creatures does not exceed the hum of a single wasp. The slightest zephyr disperses them; and if, in their progress, they chance to be over your head, if you walk slowly on, they will accompany you, and regulate their motions by yours." All the male, and a great number of the female, ants become the prey of birds or fish, or are destroyed in various ways; but a few females remain, some of which become the founders of new colonies, while others return to their original nest, when it is said that they are seized forcibly by some of the working ants, who tear off their wings, and keep them prisoners till they are ready to lay their eggs. During the time that the female ants are in this state of durance, the working ants, though hanging pertinaciously to each leg, to prevent their going out, at the same time attend upon them with the greatest care, feeding them regularly, and conducting them where the temperature is suitable for them, but never quitting them for a single moment. As soon as the female begins to lay her eggs, the working ants which are in attendance on her carry them off, and deposit them in proper places for them to be hatched. Each female lays four or five thousand eggs in the course of a year, so that when a single female founds a colony, she is very soon enabled to people it. When a female has founded a colony, the working ants begin to pay a homage to her very similar to that which bees render to their queen; and, as Messrs. Kirby and Spence observe, "all press round her, offer her food, conduct her by her mandibles through the difficult or steep passages of the formicary; nay, they sometimes even carry her about their city: she is then suspended upon their jaws, the ends of which are crossed; and, being coiled up like the tongue of a butterfly, she is packed so close as to incommode the carrier but little. When he sets her down, others surround and caress her, one after another tapping her on the head with their antennæ." "In whatever apartment," says Gould, "a queen condescends to be present, she commands obedience and respect. An universal gladness spreads itself through the whole cell, which is expressed by particular acts of joy and exultation. They have a particular way of skipping, leaping, and standing upon their hind legs, and prancing with the others." The ants appear to make use of these frolics to show their joy at the presence of their queen. It is said, that when a queen begins to form a colony, the first thing she does is to strip herself of her wings; so that when the female ants belonging to a colony already formed are stripped of their wings by the workers, it is not an act of cruelty on their part, but rather a delicate attention, as they spare the queen the trouble of taking off her wings herself.

COMMON ANT.

WINGED ANT.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above Horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Height above Horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 3h. 4h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 8h. 9h. 10h	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	14TH S. aft. TRIN.	5 13	0 6	46¾	6 46	Morning.	7 22	58¼	3 28		25		8 20	9 5	244
2	M	London bt., 1666.	5 15	Before 12 o'Clock.	46½	6 44	0 15	8 22	58¼	4 26		26		9 45	10 25	245
3	Tu	Partridge and Bustard Shooting begins on the 1st.	5 16	0 44	46	6 42	1 22	9 23	57¼	5 16		27		11 10	11 45	246
4	W	Alpha Cygni souths 9h 41m P.M.	5 18	1 3	45¾	6 40	2 37	10 23	54½	5 57		28		No Tide.	0 20	247
5	Th	*Old. St. Bartholo.*	5 20	1 23	45¼	6 37	3 56	11 21	50¾	6 31		29		0 50	1 20	248
6	F	Alpha Aquarii souths 10h 55m P.M.	5 21	1 43	45	6 35	5 18	Afternoon	46	7 1		○		1 45	2 5	249
7	S	*Eunurchus*	5 23	2 2	44½	6 32	6 40	1 11	41	7 28		1		2 30	2 55	250
8	S	15TH S. aft. TRIN.	5 25	2 23	44¼	6 29	8 0	2 3	36	7 55		2		3 15	3 40	251
9	M	[Nativity of B. V. Mary	5 26	2 43	43¾	6 27	9 15	2 53	31	8 19		3		3 55	4 20	252
10	Tu	Length of day 12h 58m	5 27	3 3	43½	6 25	10 30	3 43	26¾	8 45		4		4 40	5 0	253
11	W	Length of night 11h 7m	5 29	3 24	43	6 22	11 41	4 32	23½	9 16		5		5 15	5 35	254
12	Th	Day breaks 3h 32m	5 31	3 45	42¾	6 20	Afternoon	5 21	20¾	9 50		6		5 55	6 20	255
13	F	Twilight ends 8h 20m	5 32	4 6	42¼	6 18	1 48	6 10	19	10 29		☽		6 40	7 5	256
14	S	*Holy Cross*	5 33	4 27	42	6 16	2 43	6 59	18¼	11 14		8		7 30	8 0	257
15	S	16TH S. aft. TRIN.	5 35	4 48	41½	6 14	3 31	7 47	18¾	Morning		9		8 40	9 20	258
16	M	Buck-Hunt. ends	5 36	5 9	41¼	6 12	4 12	8 35	19¾	0 6		10		10 0	10 45	259
17	Tu	*Lambert*	5 38	5 30	40¾	6 10	4 47	9 21	22	1 2		11		11 20	At Midnight	260
18	W	Ember Week. K	5 40	5 51	40½	6 7	5 15	10 7	24¾	2 2		12		No Tide	0 25	261
19	Th	[George I. & II. land	5 42	6 13	40	6 5	5 41	10 51	27¾	3 5		13		0 50	1 10	262
20	F	Fomalhaut souths 10h 51m P.M.	5 43	6 34	39¾	6 2	6 5	11 36	32¼	4 10		14		1 30	1 45	263
21	S	*St. Matthew*	5 45	6 55	39¼	6 0	6 27	Morning.	—	5 16		●		2 5	2 20	264
22	S	17TH S. aft. TRIN.	5 46	7 16	38¾	5 58	6 48	0 20	36¼	6 24		16		2 35	2 50	265
23	M	Autumn begins	5 48	7 37	38½	5 56	7 11	1 4	41	7 31		17		3 5	3 20	266
24	Tu	Alpha Pegasi souths 10h 43m P.M.	5 49	7 57	38	5 54	7 36	1 50	45⅕	8 42		18		3 40	3 55	267
25	W	Alpha Andromedæ souths 11h 42m P.M.	5 51	8 18	37¾	5 52	8 4	2 38	49¾	9 52		19		4 10	4 25	268
26	Th	*St. Cyprian*	5 53	8 38	37¼	5 50	8 37	3 28	53¼	11 4		20		4 45	5 5	269
27	F	Length of day 11h 52m	5 55	8 59	37	5 47	9 18	4 20	56¼	Afternoon		21		5 20	5 40	270
28	S	[*Michael. Day.*	5 56	9 19	36½	5 45	10 8	5 16	58¼	1 20		☾		6 0	6 25	271
29	S	18TH S. aft. TRIN.	5 58	9 38	36¼	5 43	11 6	6 13	58¾	2 20		23		6 55	7 25	272
30	M	*St. Jerome*	5 59	9 58	35¾	5 41	Morning.	7 12	58	3 10		24		8 0	8 45	273

SEPTEMBER.

The Sun is situated north of the Equator till the 22nd, and he crosses the Equator, going south, on the 23rd. He crosses from the sign Virgo to Libra on the 23rd day, at 10h. A.M., having been in the former sign 30 days, 20 hours, and 38 minutes. He rises and sets on the 5th at the E. by N. and W. by N., and on the 23rd at the E. and W. points of the horizon respectively. On the 1st day his distance from the Earth is 95,816,000 miles.

The Moon is in Gemini on the 1st; and enters Cancer on the 3rd; Leo on the 4th; Virgo on the 6th; Libra on the 10th; Ophiuchus on the 12th; Sagittarius on the 14th; Capricornus on the 16th; Aquarius on the 18th; Pisces on the 20th; Cetus on the 21st; near Pisces and Cetus on the 24th; near Aries and Cetus on the 25th. She is crossing the Milky Way on the 28th. She enters Gemini on the 28th, and Cancer on the 30th.

She is above the horizon when the Sun is below, during the morning hours of the first three days and last eleven days, and during the evening hours, from the 9th to the 24th.

She is at her extreme north position on the 1st; is on the Equator on the 8th; and her extreme south position on the 15th: she then begins to move northward; is on the Equator on the 22nd; and reaches her extreme north position a second time on the 29th.

She is near Mercury, Mars, and Jupiter on the 7th; Venus on the 9th; Saturn and Uranus on the 23rd.

Mercury is in the constellation Virgo throughout the month.

He is an evening star; and sets on the 1st at 7h. 21m.; on the 15th, at 6h. 41m.; and on the last day, at 5h. 44m. The Sun sets on these days 35 minutes, 27 minutes, and 3 minutes before the planet. On the 9th he sets at the W. by S.; and towards the end of the month, near W.S.W. He moves eastward among the stars till the 24th; is stationary among them on the 25th; and moves westward from the 26th. He is near the Moon on the 7th; Mars on the 8th, and again on the 26th; is near Spica Virginis on the 20th; and is at his greatest eastern elongation on the 12th. His path in the heavens is shewn in the diagram below.

Venus is in the constellation Virgo till the 11th; and in that of Libra from the 12th.

She is an evening star; she sets, on the 1st, at 7h. 55m. P.M.; on the 15th, at 7h. 22m. P.M; and on the last day, at 6h. 50m. P.M.; on the 11th at the W.S.W., and on the 28th at the S.W. by W. points of the horizon. She is moving eastward among the stars, and is near the Moon on the 9th. For her path in the heavens see the diagram in November; and for her telescopic appearance see the engraving in December.

Mars is in the constellation Virgo throughout the month.

He is an early evening star, and sets, on the 1st, at 7h. 34m. P.M.; on the 15th, at 6h. 54m. P.M.; and on the last day, at 6h. 12m. P.M; near the W. at the beginning of the month, and at the W. by S. point of the horizon on the 21st: he is moving eastward among the stars; he is near the Moon and Mercury on the 7th, and again near Mercury on the 26th. His altitude above the horizon when he souths on the 1st is 36¾°, decreasing to 29° nearly on the last day. For his path in the heavens during this month, see the diagram in November.

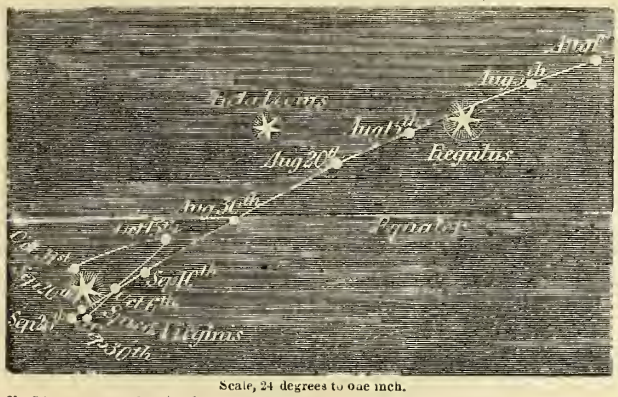
Jupiter is in the constellation Virgo throughout the month.

He sets, on the 1st, at 7h. 32m. P.M.; and on the last day, at 5h. 45m. P.M.; near the W. point of the horizon. His altitude at the time of southing on the 1st is 40°¼; and on the last day, is 37°¾. His motion is slowly eastward among the stars; and he is near the Moon on the 7th. For his path in the heavens see the diagram in May.

Saturn is in the constellation Pisces throughout the month.

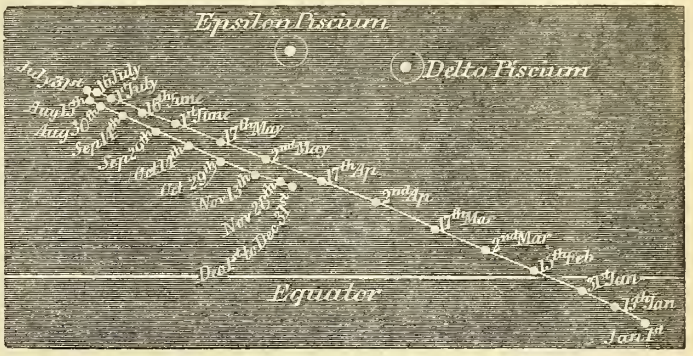
He is visible throughout the night; and rises on every day near the E. by N.

PATH OF MERCURY FROM AUGUST 1 TO OCTOBER 31, 1850.



Scale, 24 degrees to one inch.

PATH OF SATURN DURING THE YEAR 1850.



Scale, 6 degrees to one inch.

Jupiter is in the constellation Virgo throughout the month.

He sets, on the 1st, at 7h. 32m. P.M.; and on the last day, at 5h. 45m. P.M.; near the W. point of the horizon. His altitude at the time of southing on the 1st is 40°¼; and on the last day, is 37°¾. His motion is slowly eastward among the stars; and he is near the Moon on the 7th. For his path in the heavens see the diagram in May.

Saturn is in the constellation Pisces throughout the month.

He is visible throughout the night; and rises on every day near the E. by N. point of the horizon, at 8h. 4m. P.M., on the 1st; at 7h. 8m. P.M., on the 15th; and at 6h. 7m. P.M., on the 30th. He souths at an altitude of 43°⅔ nearly. He moves slowly westward among the stars, and is near the Moon on the 23rd. His path among the stars throughout the year is shown in the above diagram.

Uranus is in the constellation Aries throughout the month.

He rise, on the 1st, at 8h. 9m. P.M.; and on the 31st, at 6h. 13m. P.M. He souths on the 15th, at 2h. 15m. A.M., at an altitude of 49°½ nearly. He moves westward among the stars, and is near the Moon on the 23rd.

Neptune rises, on the 1st, at 6h. 41m. P.M.; on the 15th, at 5h. 45m. P.M.; and on the last day, at 4h. 46m. P.M.

ON THE APPARENT MOTIONS OF THE SUN, MOON, AND PLANETS.

(*Continued from page* 33.)

September, the lengths of both days and nights are equal all over the earth.

The circle which the sun describes is called the Ecliptic—so named from the circumstance of the Moon, at the time of her eclipse, occupying that part of the heaveus which is passed over by the Sun; in fact, as was frequently stated last year, no eclipse of either the Sun or Moon can take place unless the Sun, the Moon, and the Earth are in, or nearly in, the same straight line.

The Ecliptic is, and has been from time immemorial, divided into twelve equal parts, called Signs—each of which, therefore, contains one-twelfth part of the whole circle, or thirty degrees. The names and symbols of these signs are inserted on page 3. The space extending eight degrees on either side of the Ecliptic is called the Zodiac; and within this space the greater part of the celestial phenomena connected with the planetary system takes place.

The motion of the Sun in his orbit is not uniform. This is evident from the fact of his remaining several days longer in the northern than in the southern signs. On page 3 will be seen the length of the seasons, from which it appears that at present Spring is shorter than Summer, and the Autumn longer than Winter; and that the interval of time between the vernal and autumnal

(*Continued on page* 41.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon		Venus. Afternoon		Mars Afternoon		Jupiter. Afternoon		Saturn. Morning		Neptune. Afternoon	
	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
1	1	28	2	40	1	41	1	13	2	39	11	53
6	1	31	2	41	1	33	0	57	2	19	11	33
11	1	31	2	42	1	26	0	42	1	58	11	12
16	1	27	2	43	1	18	0	26	1	37	10	52
21	1	19	2	44	1	11	0	10	1	16	10	32
26	1	3	2	45	1	3	Morn.		0	55	10	12
30	0	43	2	46	0	58	11	42	0	39	9	56

JUPITER'S SATELLITES.

Eclipses of

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
29 Ophiuchi	6	12 9 7 P.M. 12 9 45 P.M.	Dark Bright	4° N. & 70° N.
Omicron Capricorni	6	16 11 31 P.M. 17 0 34 A.M.	Dark Bright	2° N. & 66° N.
Iota Aquarii	4	18 10 54 P.M. 18 11 40 P.M.	Dark Bright	30° N. & 75° N.
70 Aquarii	6	19 7 20 P.M. 19 8 16 P.M.	Dark Bright	9° N. & 79° N.
Aldebaran	1	At the time of Immersion below the horizon. 26 9 8 P.M.	Dark	22° N. & 90° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

New Moon ..	6D.	5H.	28M.	A.M.
First Quart.	13	8	21	A.M.
Full Moon ..	21	0	40	P.M.
Last Quart.	28	9	53	P.M.
Perigee ..	4	10		P.M.
Apogee ..	17	1		A.M.

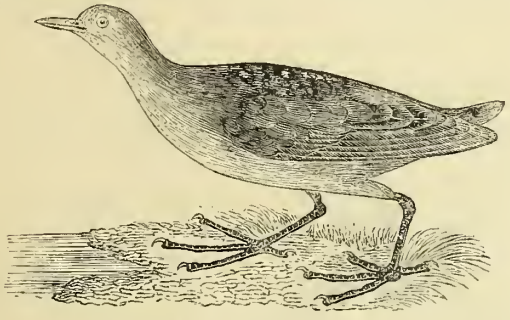
RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South	Venus. Right Ascension	Venus. Declination South	Mars. Right Ascension	Mars. Declination South	Jupiter Right Ascension	Jupiter Declination North.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	12h. 9m	2° 2′	13h. 21m	9° 30′	12h. 22m	1° 51′	11h. 54m	1° 48′	1h. 19m	5° 25′	1h 53m	10° 58′	22h. 31m	10° 12′
6	12 31	5 14	13 41	11 54	12 34	3 11	11 58	1 23	1 18	5 18	1 52	10 56	22 31	10 17
11	12 51	8 5	14 2	14 12	12 46	4 30	12 2	0 58	1 17	5 11	1 52	10 53	22 30	10 20
16	13 7	10 27	14 23	16 23	12 58	5 50	12 6	0 32	1 16	5 3	1 51	10 50	22 30	10 23
21	13 19	12 7	14 44	18 26	13 11	7 9	12 10	0 6	1 14	4 55	1 51	10 47	22 29	10 25
26	13 23	12 45	15 4	20 49	13 23	8 27	12 14	South.	1 13	4 46	1 50	10 43	22 29	10 27

SEPTEMBER.—LOBSTER FISHING OFF FOLKESTONE.

NOTES ON NATURAL HISTORY.—SEPTEMBER.

SEPTEMBER is the favourite month of sportsmen; and in the first week or two, in addition to the ordinary number of partridges, many corn-crakes are killed, as they are generally very abundant in the fields, particularly where seed clover has been sown with barley. Corn-crakes, Mr. Yarrell observes, are excellent game for young sportsmen, as they fly very slowly with their legs hanging down, and seldom go farther than to the nearest hedge; while they are so highly prized as food, that it was formerly said two landrails are a present for a Queen. The corn-crake or landrail will put on the appearance of death when exposed to danger from which it cannot escape; and Mr. Jesse relates the following incident in proof of this assertion:—"A gentleman had a corn-crake brought to him by his dog, to all appearance quite dead. As it lay on the ground, he turned it over with his foot, and felt convinced that it was dead. Standing by, however, in silence, he suddenly saw it open an eye. He then took it up; its head fell; its legs hung loose, and it appeared again quite dead. He then put it in his pocket, and before long he felt it all alive, and struggling to escape. He then took it out; it was as lifeless as before. Having laid it again upon the ground, and retired to some distance, the bird in about five minutes warily raised its head, looked round, and decamped at full speed." There are two other kinds of corn-crake besides the common species: the one is called the spotted corn-crake, and is very prettily marked with white spots on the wings; and the other, which is called the little crake, is of an olive-brown colour, and much smaller than the other kinds.



LITTLE CRAKE.

There are but few plants in flower at this season; and though the woods are gay, from the autumnal tints taken by the leaves of some of the trees, many leaves have fallen, and the mornings and evenings have become cold and damp. Among the few flowers left may be seen the colchicum, which resembles the crocus in its form, but which is of a much paler lilac, and which has long, slender, succulent, white stems, without any appearance of leaves (which, indeed, do not show themselves above ground till the following spring, when they appear, together with their fertilised seed-vessels—which, by a wise provision of nature, have remained buried in the earth during the winter). This plant is employed by medical men, and has an extraordinary effect in lulling the pain of gout and rheumatism; but it is a very dangerous medicine, and an over-dose has frequently proved fatal.

COMMON NAVEL-WORT.

In moist, warm places, a curious plant is found in flower at this season, called the Common Navel-wort (*Cotylèdon Umbilicus*). It generally grows on walls or cottage roofs, or moist rocks; and its principal ornament consists in its singularly-shaped leaves, which are drawn down in the centre, so as to form a kind of cup, or wine-glass, the stalk of which is formed by the foot-stalk which proceeds from the centre of the under side of the leaf. The whole plant is very succulent, including the flowers, which are greenish in the common kind. In the Greater Navel-wort, on the contrary, the flowers are the most ornamental part, as they are of a bright yellow, and they form a large erect spike; while the leaves are not remarkable for their beauty. In some parts of the country this plant is called Penny-wort, from the shape of the leaves, which are sometimes round and flat, like a penny.

In September flies begin to be very troublesome; and, though they do not sting like gnats or mosquitos, they are, perhaps, still more disagreeable from the incessant buzzing they keep up around us, and the irritation they occasion by settling on the hands and face. The immense numbers of these troublesome insects surpass all belief, and it is said that in some places they have been known to be fifty to the square inch. "It is a remarkable, though as yet unexplained fact," observes Mr. Spence, in the sixth edition of the *Introduction to Entomology*, "that if nets of thread or string, with meshes a full inch square, be stretched over the open windows of a room in summer or autumn, when flies are the greatest nuisance, not a single one will venture to enter from without; so that by this simple plan a house may be kept free from these pests, while the adjoining ones, which have not had nets applied to their windows, will swarm with them. In order, however, that the protection should be efficient, it is necessary that the rooms to which it is applied should have the light enter by *one side* only; for, in those which have a thorough light, the flies pass through the meshes without scruple." "It is a singular fact," Mr. Spence observes, in another place, "that Herodotus, above two thousand years ago, stated that the Egyptian fishermen protected themselves from the attacks of mosquitos by spreading their fishing-nets over their beds: a fact which has greatly puzzled all his commentators, who, not conceiving the possibility of mosquitos being kept off by fishing-nets, which must necessarily have wide meshes, have supposed the father of history to have alluded to some protection of fine linen, similar to the gauze nets now used against these insects. But in this, as in so many other instances, the supposed error is not that of Herodotus, but of his commentators, who, ignorant of the fact above related as to flies being excluded by wide-meshed nets, could not conceive it to be the case with mosquitos." As house-flies generally lay their eggs in stable manure, Mr. Spence suggests that the number of flies might be greatly lessened in large towns if the stable dung were kept in pits closed by trap-doors. However, if this were the case, it would not be completely efficacious, as it is known that flies will lay their eggs in almost any kind of filth; and their maggots have been found in sinks and other similar places. I was formerly supposed, from the experiments of Sir Everard Home, that flies were enabled to walk against glass, and with the back downwards in various situations, by the formation of a vacuum under the soles of their feet, if they may be so termed, as it was observed that the margins of the feet were closely applied to the glass, while the central part was drawn up. It has, however, now been discovered that this hypothesis was not correct, as Mr. Blackwall (a gentleman residing in Manchester, and an acute observer of nature) noticed that flies remained attached to the sides of an exhausted glass receiver of an air-pump, even after they had entirely lost the power of locomotion, and an evident distension of the body had been occasioned by the exhaustion of the air. To detach them from these stations, Mr. Westwood adds, the employment of a small degree of force was found requisite. "In prosecuting this subject, clean phials of transparent glass, containing spiders and various insects in the larva and imago (perfect) states, capable of walking on their upright sides, were breathed into, till the aqueous vapour expelled from the lungs was copiously condensed on their inner surface. The result was remarkable; the moisture totally prevented those animals from obtaining any effectual hold on the glass, and the event was equally decisive if a small quantity of oil was substituted for the aqueous vapour." In fact, it was found that powder, or any substance on the inside of the phials, prevented the flies from climbing, and the idea naturally suggested itself that some glutinous substance was emitted by the feet of the flies which enabled them to adhere to the glass. The next point to be determined, therefore, was, whether spiders and insects in the larva and perfect states were found to leave any visible track behind them when they crawled over glass; and, by the aid of powerful magnifying-glasses, it was found that traces were left of an exceedingly minute quantity of glutinous matter, which appeared to have been emitted by the feet of these creatures; and subsequent experiments proved that the hair-like appendages which form the brushes of spiders and flies are all tubular. It has often been observed that flies that have been half drowned, if taken out of the milk or water into which they have fallen, take a great deal of time in cleaning their feet before they can walk; and this, no doubt, is to clear out the brushes of their feet, and to bring them into a proper state for emitting the glutinous fluid.

DRONE FLY.

The drone-fly (*Eristàlis tènax*) bears so much resemblance to a bee that it is difficult at first sight to distinguish it from one; but on examining it carefully, it will be found that it has only two wings, whereas all kinds of bees have four. "The eggs of this fly," a writer in the *Gardeners' Chronicle* tells us, "are dropped in stagnant water while the female is on the wing." The larvæ are of a most extraordinary shape, being thick at one end, and having a long tail like the stalk of a plant at the other. "The underside exhibits an infinity of vessels, with a large mass or two under the thorax, like a bundle of salmon-coloured eggs. This insect has also numerous feet, surrounded by little hooks, distinctly projecting from the body, which assist it in walking. When the larva is full-fed, it crawls out of the water, and secretes itself amongst stones, in palings, or crevices of woodwork, &c.: having fixed itself, it gradually contracts as the skin dries and hardens, until it assumes an oval shape; it is then of a dirty ochreous brown colour, the anterior extremity is a little depressed, having two horns above, covered with glands on the upper surface for breathing, and beneath them are two similar, but very minute, horns; on the underside are seven pairs of spots formed of black horny points, and a slight indentation shows the position of the mouth; the tail, although useless in this stage, does not fall off." About the first week in September, "by dilating itself, the depressed portion of the pupa, to which the four horns are attached, is forced off, and the fly comes forth of a pale colour, with its wings shrivelled;" but, in a short time, the wings increase to their proper size, and the atmosphere hardens and colours the skin.

The ground beetles are occasionally covered with very small parasitical insects, which appear to annoy them exceedingly, as they run about shaking themselves as though they were using every possible effort to get rid of their tormentors; and on one occasion a ground beetle was observed to run through the loose particles of a heap of lime rubbish, squeezing itself through with considerable difficulty, but emerging on the opposite side quite clear of its parasitical insects, which had been all brushed off by the loose particles of rubbish through which the beetle had forced itself.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon.	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Souths. Height above horizon.	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 5h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 7h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Tu	*Remigius.* Phst.	6 1	10 17	35¼	5 40	0 16	8 10	56	3 53		25		9 30	10 15	274
2	W	[shooting begins.	6 3	10 36	35	5 38	1 32	9 7	52¾	4 28		26		11 0	11 40	275
3	Th	*Old St. Matthias*	6 5	10 54	34½	5 35	2 52	10 3	48½	4 59		27		No Tide.	0 10	276
4	F	Gamma Aquilæ souths 6h. 47m. P.M.	6 7	11 13	34¼	5 32	4 13	10 57	43½	5 21		28		0 40	1 0	277
5	S	Alpha Aquilæ souths 6h. 47m. P.M.	6 9	11 31	33¾	5 30	5 31	11 49	38½	5 51		○ 1		1 25	1 50	278
6	S	19TH S. aft TRIN.	6 10	11 48	33½	5 27	6 49	Afternoon	33¼	6 18		2		2 10	2 30	279
7	M	[*Faith*	6 12	12 5	33	5 25	8 7	1 31	28¾	6 44		3		2 55	3 15	280
8	Tu	Length of day 11h. 8m.	6 14	12 22	32¾	5 22	9 21	2 21	24¾	7 12		4		3 35	3 50	281
9	W	*St. Denys* [beg	6 16	12 38	32½	5 20	10 30	3 11	21½	7 45		5		4 10	4 30	282
10	Th	Oxf. and Cam. T.	6 17	12 54	31¾	5 18	11 35	4 1	19½	8 22		6		4 50	5 5	283
11	F	Old Michael. Day	6 19	13 9	31½	5 15	Afternoon	4 51	18¼	9 5		7		5 25	5 45	284
12	S	Fire Insur. due	6 20	13 24	31¼	5 13	1 26	5 40	18¼	9 55		)		6 5	6 30	285
13	S	20TH S. aft. TRI-	6 22	13 39	30¾	5 11	2 10	6 29	19	10 51		9		6 50	7 20	286
14	M	NITY. Translation of Edward the Confessor.	6 22	13 53	30½	5 8	2 47	7 16	20¾	11 50		10		7 55	8 35	287
15	Tu	Beta Aquilæ souths 6h. 11m. P.M.	6 25	14 6	30	5 6	3 18	8 1	23½	Morning.		11		9 20	10 0	288
16	W	Alpha Cygni souths 6h. 56m. P.M.	6 27	14 19	29¾	5 4	3 45	8 46	26¾	0 51		12		10 40	11 15	289
17	Th	*Etheldreda*	6 28	14 32	29¼	5 2	4 8	9 31	30½	1 56		13		11 50	No Tide.	290
18	F	*St. Luke*	6 30	14 43	29	5 0	4 32	10 15	34¾	3 3		14		0 15	0 35	291
19	S	Alpha Aquarii souths 8h 7m P.M.	6 31	14 54	28½	4 58	4 53	11 0	39¼	4 10		15		0 55	1 15	292
20	S	21ST S. aft TRIN.	6 32	15 5	28¼	4 56	5 15	11 45	43¾	5 19		● 16		1 30	1 45	293
21	M	Length of day 10h 20m	6 34	15 15	27¾	4 54	5 40	Morning.		6 27		17		2 5	2 20	294
22	Tu	Length of night 13h 41m	6 36	15 24	27½	4 52	6 6	0 33	48¼	7 40		18		2 35	2 55	295
23	W	Twilight ends 6h 42m	6 38	15 33	27¼	4 50	6 37	1 23	52¼	8 53		19		3 10	3 30	296
24	Th	Day breaks 4h 47m	6 40	15 40	26¾	4 47	7 15	2 16	55½	10 5		20		3 45	4 5	297
25	F	*St. Crispin*	6 42	15 47	26½	4 45	8 3	3 11	57¾	11 13		21		4 20	4 40	298
26	S	Alpha Pegasi souths 8h 37m P.M.	6 44	15 54	26	4 43	9 0	4 9	59	Afternoon		22		5 0	5 20	299
27	S	22ND S. aft. TRIN	6 46	16 0	25¾	4 41	10 5	5 7	58¾	1 10		23		5 45	6 15	300
28	M	*St. Simon and St.*	6 48	16 4	25½	4 39	11 18	6 4	57	1 54		☾ 24		6 40	7 15	301
29	Tu	[*Jude*	6 50	16 9	25	4 37	Morning.	7 1	54¼	2 32		25		7 50	8 35	302
30	W	Alpha Andromedæ souths 9h 2im	6 51	16 12	24¾	4 36	0 34	7 55	50¼	3 2		26		9 20	10 5	303
31	Th	Twilight ends 6h 26m	6 53	16 15	24½	4 34	1 53	8 48	45¼	3 28		27		10 50	11 20	304

OCTOBER.

The Sun is situated south of the Equator, and is moving south. On the 23rd day, at 6h. 13m. P.M., he passes from the sign Libra to Scorpio (the Scorpion), having been in the former sign 30 days 8 hours and 13 minutes. He rises and sets on the 11th, at the E. by S. and W. by S.; and on the 30th, at the E.S.E. and W.S.W. points of the horizon respectively. On the 1st day he is 95,039,000 miles from the Earth.

The Moon enters Leo on the 1st; Virgo on the 4th; Libra on the 7th; Ophiuchus on the 9th; Sagittarius on the 11th; Capricornus on the 13th; Aquarius on the 16th; Pisces on the 17th; Cetus on the 19th: she is near Pisces and Cetus on the 21st; and Aries and Cetus on the 22nd: she enters Taurus on the 22nd, and passes the Milky Way on the 25th: she enters Gemini on the 26th; Cancer on the 27th; Leo on the 28th; and Virgo on the 31st.

She is above the horizon when the Sun is below, during the morning hours from the 18th to the end of the month, and during the evening hours from the 8th to the 25th.

She is north of the Equator till the 5th, on which day she crosses the Equator going southward, and reaches her extreme sonth position on the 12th: she then begins to move northward; is on the Equator on the 19th, and on the 26th reaches an extreme north position.

She is near Mercury and Jupiter on the 5th; Mars on the 6th; Venns on the 9th; Saturu on the 20th; and Uranus on the 20th.

Mercury is in the constellation Virgo throughout the month.

He is a morning star after the 8th, till which day the Sun rises before him; on the 15th he rises at 5h. 12m., heing 1h. 3m. before the Sun; on the 24th he rises at 4h. 51m., heing 1h. 50m. before the Sun; and on the last day, at 5h. 15m., the Sun rising 1h. 49m. afterwards. He is favourahly situated from the 15th for observation before sunrise. On the 15th he rises midway between the E. and E. by S. points of the horizon; and near the end of the month the point of his rising is E. by S. nearly. He moves westward among the stars till the 15th; is stationary among them on the 16th; and moves eastward from the 17th, as is shewn in the diagram exhihiting his path in Septemher.

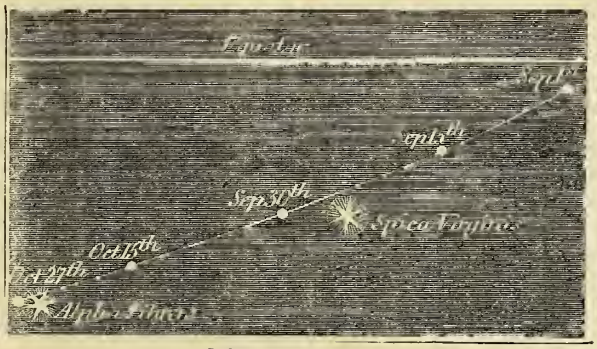
Venus is in the constellation Lihra till the 3rd, and in that of Scorpio from the 4th to the 26th; and in Sagittarins on the 27th.

She is an evening star; and sets, on the 1st, at 6h. 48m. P.M.; on the 15th, at 6h. 24m. P.M.; and on the last day, at 6h. 3m. P.M.; at the S.W. by W. at the beginning, and at the S.W. at the end of the month. She moves slowly eastward among the stars; is at her greatest elongation on the 6th; is near the Moon on the 9th, and Antares on the 14th. For her path among the stars, see the diagram in Novemher; and for her telescopic appearance, see the engraving in Decemher. She is now hecoming hrilliant.

Mars is in the constellation Virgo till the 14th, and then enters Lihra.

He is an early evening star; and sets, on the 1st, at 6h. 9m. P.M.; on the 15th, at 5h. 32m. P.M.; and on the last day, at 4h. 55m. P.M.; near W. by S. at the beginning, and the W.S.W. points of the horizon on the 18th. He is moving eastward among the stars, and is near the Moon on the 6th. His altitude ahove the horizon when he souths, at the beginning of the month, is 28°¾; and is 21°¾ at the end of the mouth. His path among the stars is shewn in the preceding diagram.

PATH OF MARS FROM SEPTEMBER 1 TO OCTOBER 27, 1850.

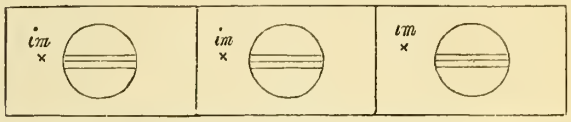


Scale, 12 degrees to one inch.

Jupiter is in the constellation Virgo throughout the month.

He sets, at the beginning of the month, the same time as the Snn sets; and after that time, he sets before the Sun. He rises, on the 1st, at 5h. 39m. A.M.; and on the last, at 4h. 18m. A.M., at the east point of the horizon. His altitude on southing, on the 1st, is 37°¾; and on the last day, is 35°¼. His motion is slowly eastward among the stars; and he is near the Moon on the 5th. His path among the stars is shewn in the diagram in May.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellatiou Pisces throughout the month.

He is visihle throughout the night; and rises midway hetween the E. and E. by N. points of the horizon, on the 1st day, at 6h. 3m. P.M.; on the 15th, at 5h. 6m. P.M.; and on the last day, at 4h. 0h. P.M. He souths at an altitude of 42°¾ nearly. He moves slowly westward among the stars; and is near the Moon on the 20th. See the diagram of last month.

Uranus is in the constellation Aries throughout the month.

He rises, on the 1st, at 6h. 9m. P.M.; and on the 31st, at 4h. 9m. P.M. He souths, on the 15th, at 15 minutes after midnight, at an altitude of 49°. He moves slowly westward among the stars; and is near the Moon on the 20th.

Neptune rises before the Snn sets; and sets, on the 1st, at 3h. 6m. A.M.; and on the last day, at 1h. 0m. A.M.

ON THE APPARENT MOTIONS OF THE SUN, MOON, AND PLANETS.

(*Continued from page* 37.)

equinoxes, viz. 186 days, 10 hours, and 57 minntes, is 7 days, 15 honrs, and 58 minutes longer than the interval hetween the autumnal and vernal exqninoxes. The Snn moves with the greatest velocity when at a point situated near the winter solstice; his daily motion at this time is ahout 1 degree, 1 minute, and 10 seconds. He moves with the least velocity when at a point near the snmmer solstice, when his daily motion is ahout 57 minutes and 11 seconds. It is constantly varying hetween these points. The average of all his daily motions is 59 minutes and 11 seconds nearly, which is his rate of motion ahout the heginning of April and October.

The point of the solar orbit which is at the greatest distance from the earth is called the *apogee* (away from the Earth); and the apparent diameter of the Sun at this time, as viewed from the Earth, is ahout 31 minutes and 31 seconds, which is its least value. The point of the solar orhit which is occnpied hy the Sun when he is nearest the Earth is called *perigee* (near the earth); and at this time his apparent diameter is ahout 32 minutes and 36 seconds, which is its greatest value. The average of all his apparent diameters, or that diameter of the Sun when he is at his average distance, is ahout 32 minutes and 3 seconds.

The Sun when viewed hy the naked eye appears to he uniformly luminons, hut when examined hy means of the telescope there frequently appear some spots of an irregular and ill-defined form upon his surface. These spots for some time past have been very frequent. Sometimes they are of an immense size, and visihle without the aid of a telescope. These spots first appear at the eastern edge of the Sun, and disappear at his western edge; and at times the same spots, after the lapse of nearly a fortnight, re-appear at the eastern edge of the Sun. The interval of time hetween the same spots occupying the same relative position is ahout 27 days and 8 hours.

The motion of the Moon among the stars is very rapid. She passes over a space equal to her diameter in about one hour; and in the course of a few hours the apparent distances hetween her and adjacent stars are very different. Her apparent motion, like that of the Sun, is *always* from west to east.

The various illustrations in this Almanack, exhihiting the apparent paths of the planets, include that of Mercury from January 1 to the middle of Decemher; that of Venus from March 1 to the end of the year; that of Mars from January 1 to Octoher 27; and those of Jupiter and Saturn for the whole year.

From these diagrams it will he remarked, that the apparent motions of the

(*Continued on page* 45.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Afternoon	Mars. Afternoon	Jupiter. Morning.	Saturn. Morning.	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	
1	0 37	2 46	0 56	11 39	0 34	9 52
6	Morn.	2 47	0 49	11 23	0 13	9 31
11	11 23	2 48	0 43	11 7	Aftern.	9 11
16	10 54	2 48	0 36	10 52	11 27	8 51
21	10 41	2 48	0 30	10 36	11 6	8 31
26	10 39	2 46	0 24	10 20	10 45	8 11
31	10 45	2 44	0 18	10 4	10 24	7 50

JUPITER'S SATELLITES.

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Stars.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
Regulus	1	2 1 52 P.M.	In Day-	17° N. &
		2 2 47 P.M.	light	90° N.
19 Capricorni	6	14 5 53 P.M.	Dark	14° N. &
		14 7 14 P.M.	Bright	72° N.
21 Capricorni	6	14 10 1 P.M.	Dark	6° N. &
		14 11 14 P.M.	Bright	72° N.
Gamma Tauri	3	23 7 16 P.M.	Bright	47° N. &
		23 7 33 P.M.	Dark	90° N.
75 Tauri	6	23 11 3 P.M.	Bright	21° N. &
		23 At Midnight		90° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.		
New Moon ..	5	2	56	P.M.	
First Quart.	13	2	30	A.M.	
Full Moon ..	21	3	11	A.M.	
Last Quart.	28	4	59	A.M.	
Perigee ..	2	11		P.M.	
Apogee ..	14	6		P.M.	
Perigee ..	29	4		P.M.	

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination South.	Jupiter. Right Ascension	Jupiter. Declination South	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	13h. 17m	11°52′	15h. 25m	22° 1′	13h. 36m	9°44′	12h. 18m	0° 45′	1h. 12m	4° 37′	1h. 49m	10° 39′	22h. 27m	10° 30′
6	13 1	9 11	15 46	23 32	13 48	10 59	12 22	1 11	1 10	4 28	1 49	10 35	22 27	10 32
11	12 42	5 30	16 7	24 50	14 1	12 33	12 26	1 36	1 9	4 19	1 48	10 31	22 27	10 33
16	12 33	2 47	16 27	25 55	14 15	13 25	12 30	2 1	1 7	4 10	1 47	10 27	22 27	10 35
21	12 39	2 19	16 46	26 46	14 28	14 36	12 34	2 26	1 6	4 51	1 46	10 22	22 57	10 37
26	12 57	3 50	17 4	27 23	14 41	15 43	12 38	2 51	1 4	3 2	1 46	10 18	22 26	10 38

OCTOBER.—HERRING FISHING, ISLE OF MAN.

NOTES ON NATURAL HISTORY.—OCTOBER.

In this month many of the summer birds take leave of this country, and the winter birds arrive. Among the latter may be mentioned the wild swan, the wild goose, and the wild duck. All these aquatic birds make a harsh screaming as they pass over the land, which is the more annoying as they all fly at night as well as by day. The stork is the only one of these birds of passage which is not clamorous. "Before the storks take their departure from their northern summer residence," says Mr. Forster, "they assemble in large flocks, and seem to confer on the plan of their projected route. Though they are very silent at other times, on this occasion they make a singular clattering noise with their bills, and all seems bustle and consultation. It is said that the first north wind is the signal for their departure, when the whole body become silent, and move at once, generally in the night, and, taking an extensive spiral course, they are soon lost in the air." Cranes, on the contrary, are very noisy; but they are very rare in this country. Wild geese are, however, common; and the flocks are always in the shape of a wedge when they fly, so that the birds may cut the air with less individual exertion. Sometimes, however, they change their line to the resemblance of an A and an L, and sometimes they form a straight line; but the reason for these changes is not known. The Canada or cravat goose is only occasionally seen in this country: it is a remarkably beautiful goose, with a glossy black neck and white cheeks, which render it, as Mr. Waterton observes, "so particularly conspicuous, that those who have seen it once can never be at a loss to recognise it when viewed among all the other species of the goose tribe. There can be nothing," continues Mr. Waterton, "more enlivening to rural solitude than the trumpet-sounding notes of the Canada goose. They can be heard here [at Walton Hall] at most hours during the day, and often during the night." Mr. Watorton afterwards bought two barnacle geese at Rotterdam; and on their arrival at Walton Hall, they were turned on the lake in company with the Canadian geese. The following autumn one of these little barnacle ganders paired with a large old Canadian goose, and a nest having been made on the island the ill-assorted pair took possession of it, and the goose, having laid her eggs, began to sit. "Nothing," says Mr Watertou, "could exceed the assiduity with which the little barnacle stood guard, often on one leg, over his bulky partner, day after day, as she was performing her tedious task. If anybody approached the place, his cackling was incessant; he would run at him with the fury of a turkey-cock; he would jump up at his knees, and not desist in his aggressions until the intruder had retired." At last two young geese were produced; and the vociferous gesticulations and struttings of the little gander were beyond all endurance when he first got sight of his long-looked for progeny. The hybrids were elegantly shaped, and neither so large as the mother nor so small as the father, and they partook of the colours of both parents.

The trees are now almost all stripped of their leaves, but those which remain become of the most brilliant and vivid colours. All nature, however, assumes a gloomy appearance, which is only enlivened by the recollection that the return of spring will restore the beauty of the groves. The season, however, forcibly recalls the following beautiful lines from the beginning of Pope's translation of Homer:—

> Like leaves on trees the race of man is found—
> Now green in youth, now withering on the ground;
> Another race the following spring supplies,
> They fall successive and successive rise:
> So generations in their course decay,
> So flourish these when those are pass'd away.

Among the plants which are still growing luxuriantly on moist heaths and

MARSH-PENNYWORT.

in marshy places, may be mentioned the little plant called marsh-pennywort or white-rot (*Hydrocótyle vulgàris*); the latter name alluding to its supposed evil properties in giving the rot to sheep; and the former to the situations in which it is found, and the shape of its leaves. The flowers are inconspicuous, but the plant itself is rather pretty; and it has the advantage of looking green and fresh when nearly all the vegetation around it has been brown and withered.

At this season immense quantities of herrings are found on the southern coast of England. The shoals of this fish (which is said to derive its name from the German word *heer*, an army, in allusion to its countless multitudes) are first seen off the Shetland Islands in April and May; but in the succeeding months they seem gradually to advance southward; till at last, about the beginning of September, there appears on the south coast an immense mass of fish, divided into distinct columns of five or six miles in length, by three or four in breadth. These dense masses drive the water before them with a kind of rippling motion; and, as a writer on the subject has expressed it, "sometimes they sink for the space of ten or fifteen minutes, then rise again to the surface, and in bright weather reflect a variety of splendid colours, like a field of the most precious gems." Great shoals of pilchards appear in the same manner on the coast of Cornwall.

The water-scorpion (*Nèpa*) is an extremely ferocious insect, which is said to be so savage as to destroy insects merely for the pleasure of killing them; as one that was put into a basin of water with some young tadpoles, is said to have killed them all without attempting to eat one. The common water-scorpion (*Nèpa cinèrea*) is found in ditches, ponds, and other pieces of stagnant water. These insects swim but slowly, and spend most of their time at the bottom of the water, seeking in the mud those insects which serve them as food, and which they seize very forcibly with their crab-like feet. At night they leave the ponds, and fly about with the greatest rapidity. The larva only differs from the perfect insect in its want of wings. It proceeds from an egg of a very singular form: it is oval, and from one end proceed several delicate filaments, which give it the appearance of the seeds of some of the plants belonging to the *Compósitæ*. The water-scorpion sometimes leaves the water, and is seen crawling on the grass.

WATER-SCORPION.

The water-boatman, or boat-fly (*Notonècta*), is a very singular aquatic insect, which always swims on its back, striking out its legs like oars, to propel itself along. It is very ferocious, and not only destroys all the smaller insects which fall in its way, but it will attack insects larger than itself. Mr. Spence also mentions that one which he caught wounded his finger with its rostrum, and gave a sharp, severe pain, as though it had been burned. These insects are only found in standing waters or sluggish rivers, and they swim on the surface of the water, unless they are disturbed; but, on the approach of danger, they immediately disappear, though they cannot remain any great length of time without coming to the top to breathe. They frequently creep on the water-plants and the mud, in search of the insects on which they feed; and when the weather is fine and warm, they often land and fly about, sometimes to a considerable distance. The female lays her eggs, which are white and long in shape, on the leaves of aquatic plants; and, as soon as the young are hatched, they begin to swim on their backs like their mother. The larva only differs from the perfect insect in the want of wings.

BOAT-FLY.

To those who visit the sea-coast, the sea-weeds which are washed on shore by the tide afford a great source of enjoyment, from the beauty and variety of their forms and colours. The *Algæ* or sea-weeds are, in fact, the vegetation of the bottom of the sea; and most of them grow under water, being torn from their roots by the force of the rushing waters, and washed on the beach by the rolling waves. Some species, it is true, appear to be always loosely floating in the water; but by far the greater number "grow attached to rocks, stones, or other substances," being fixed by the extension of the base of the stem into a broad concave plate, which either grasps the stone to which it adheres itself, or sends out numerous fibrils, which twine themselves round the rocks so firmly that they cannot be separated without laceration of their substance. The *Algæ* are all edible; and, indeed, extremely nutritious, as they consist principally of albumen and mucilage: the latter quality renders them very useful in coughs and other affections of the chest, and as a substitute for isinglass in making jelly. Besides these qualities, some of the sea-weeds contain iodine, and most of them, when burnt, yield kelp, which is used in the manufacture of glass, &c. One of the most curious of all the kinds of sea-weed is what is sometimes called the Gulf weed; but it is also known by the name of *Sargássum*, or Sea Grape. This *Alga* is a native of the Tropics, and is found principally in the Gulf of Mexico, but it is sometimes washed on shore on the Orkney Islands, and it has been known occasionally to reach the coast of Scotland. It is, however, most abundant in the Atlantic, one part of which is called by mariners the Weedy Sea, from the immense quantity of this weed which floats on the surface of the water, and which sometimes actually impedes "the course of vessels for days together; the ocean for hundreds of miles presenting the appearance of a vast swamp or inundated meadow, and justifying the fears of the sailors in the first voyage of Columbus, who observing their slow progress and the increasing quantity of the weed, became alarmed lest, forcing their passage against the will of Heaven in search of an unknown country, their return might be rendered impossible. The accumulation of this weed in the Northern Atlantic extends nearly across its whole breadth, beginning on the east at the 30th meridian, and reaching the Bahama Islands on the west; the greatest quantities being aggregated at its eastern and western extremities, forming, as it were, two great banks, of which the former is more extensive being upwards of twelve hundred miles from north to south." The bladder chain, or *Cystosèira*, is of a dark olive green or brown hue, becoming almost black when dry. It is of a firm leathery substance, and is common on the coasts of Devonshire and Cornwall, and in the south of Ireland. It is interesting from the manner in which it is fixed to the stones, as, instead of having a root, it is attached by a flat hard disk, which, when clinging to the stone, looks just like one of the leather suckers with which boys amuse themselves by carrying stones. The *Halidrys*, or sea tree, is a very common sea-weed, which is fixed to rocks and stones by a larger sucker, frequently from one to four feet long. The bladder *Fùcus* is another very common sea-weed, and, in fact, it forms the great mass of the weeds thrown by the sea upon the land, which are collected for the purposes of manure. It is sometimes called the sea-wrack, and in other places kelp-ware, as it is burnt for the sake of making kelp. This weed has a number of little bladders in its fronds, which children amuse themselves with breaking by clapping the fronds between their hands. The seed-vessels are shaped like a pine-apple, and they are produced at the extremity of the fronds. There are several other kinds of *Fucus*, all of which are very common on the British coast. The sea-weed called *Alaria*, or badder-locks, is very good to eat; and what is called the tangle (*Laminària digitàta*) is boiled for the purpose of feeding cattle. Dr. Neill states, "that the stems in Scotland are sometimes made into knife-handles: for this purpose a pretty thick stem is selected and cut into pieces about four inches long; into these, while fresh, are stuck blades of knives, such as gardeners use for pruning and grafting. As the stem dries it contracts and hardens, closely and firmly embracing the hilt of the blade. In the course of some months the handles become quite firm, and very hard and shrivelled, so that when tipped with metal they are hardly to be distinguished from harts-horn." There are many other kinds of sea-weed, particularly the beautiful pink *Delesèria*; the *Ptilòta plumòsa*, which is sometimes of a pale crimson, and sometimes green; and several other extremely beautiful plants of the most brilliant colours and delicate texture.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Height above horizon	MOON. Sets. Afternoon.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 6h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	F	*All Saints*	6 56	16 16	24	4 32	3 11	9 39	40¾	3 54		27		11 50	No Tide.	305
2	S	Mich. Term beg.	6 57	16 17	23¾	4 31	4 28	10 29	35½	4 19		28		0 20	0 45	306
3	S	23RD S.aft.TRIN	6 59	16 17	23½	4 29	5 43	11 19	30¾	4 43		29		1 10	1 30	307
4	M	William III. land	7 0	16 16	23¼	4 27	6 59	Afternoon	26½	5 9		○ 1		1 50	2 10	308
5	Tu	Gunpowder Plot	7 2	16 15	22¾	4 25	8 12	1 0	22¼	5 40		2		2 30	2 50	309
6	W	*Leonard*	7 4	16 12	22¾	4 24	9 21	1 51	20¼	6 16		3		3 10	3 25	310
7	Th	Length of day 9h 16m	7 6	16 9	22¼	4 22	10 22	2 41	18¾	6 57		4		3 45	4 5	311
8	F	Length of night 14h 45m	7 7	16 5	22	4 22	11 19	3 32	17¾	7 44		5		4 20	4 40	312
9	S	Lord Mayor's D.	7 9	16 0	21¾	4 20	Afternoon	4 21	18¼	8 37		6		4 55	5 15	313
10	S	24TH S.aft.TRIN.	7 10	15 55	21½	4 19	0 47	5 9	19¾	9 35		☽ 7		5 35	5 55	314
11	M	*St. Martin*	7 12	15 48	21	4 17	1 20	5 55	22	10 36		8		6 20	6 45	315
12	Tu	Camb. T. divides	7 14	15 41	20¾	4 16	1 48	6 40	25	11 39		9		7 10	7 45	316
13	W	*Britius*	7 16	15 33	20¼	4 14	2 13	7 24	28¾	Morning.		10		8 25	9 5	317
14	Th	Alpha Pegasi souths 7h 24m P.M.	7 18	15 24	20¼	4 12	2 34	8 8	32¾	0 45		11		9 40	10 20	318
15	F	*Machutus*	7 20	15 14	20	4 11	2 57	8 52	37¼	1 51		12		10 50	11 25	319
16	S	Alpha Andromedæ souths 8h 17m P.M.	7 21	15 3	19¾	4 10	3 17	9 37	41¾	3 0		13		11 50	No Tide.	320
17	S	25TH S. af. TRIN.	7 23	14 52	19½	4 9	3 40	10 24	46¼	4 9		14		0 15	0 35	321
18	M	[Hugh, Bishop of Lincoln	7 25	14 39	19¼	4 8	4 6	11 14	50¾	5 20				0 55	1 15	322
19	Tu	Alpha Arietis souths 10h 3m P.M.	7 27	14 26	19	4 7	4 35	Morning	—	6 35		● 15		1 30	1 50	323
20	W	Ed. King & Mar.	7 28	14 12	18¾	4 6	5 11	0 6	54½	7 49		16		2 10	2 30	324
21	Th	Princess Royal b.	7 30	13 57	18½	4 4	5 56	1 2	57	9 1		17		2 45	3 5	325
22	F	*St. Cecilia*	7 31	13 42	18½	4 3	6 50	2 1	58¾	10 10		18		3 25	3 45	326
23	S	Old Martin. Day	7 33	13 26	18¾	4 2	7 54	3 0	59¼	11 8		19		4 9	4 30	327
24	S	26TH S. aft. TRIN	7 34	13 8	18	4 0	9 6	4 0	58	11 58		20		4 50	5 15	328
25	M	Mich. Term ends.	7 36	12 50	17¾	3 58	10 22	4 57	55½	Afternoon		21		5 40	6 10	329
26	Tu	[*Catherine*	7 37	12 32	17½	3 57	11 40	5 52	51¾	1 8		☾ 22		6 40	7 10	330
27	W	Princess Mary Adelaide [born, 1833.	7 39	12 12	17½	3 56	Morniug.	6 45	47½	1 36		23		7 40	8 20	331
28	Th	Day breaks 5h 38m	7 40	11 52	17¼	3 55	0 57	7 35	42½	1 59		24		9 5	9 40	332
29	F	Twilight ends at 5h 53m.	7 42	11 31	17	3 55	2 13	8 24	37½	2 22		25		10 15	10 55	333
30	S	*St. Andrew*	7 44	11 9	16¾	3 54	3 29	9 13	32¾	2 47		26		11 30	11 55	334

NOVEMBER.

THE SUN is situated south of the Equator, and is moving south. He passes, on the 22nd day, at 3h. 7m. P.M. from the sign Scorpio to Sagittarius, having been in the former sign 29 days 20 hours and 54 minutes. He rises and sets on the 1st near the E.S.E. and W.S.W.; and on the 26th, at the S.E. by E. and S.W. by W. points of the horizon. On the 1st day his distance from the earth is 94,224,000 miles.

The MOON is in Virgo till the 3rd; on which day, at 9h. P.M., she enters Libra, Ophiuchus on the 5th, Sagittarius on the 7th, Capricornus on the 10th, Aquarius on the 12th, Pisces on the 14th, Cetus on the 15th, near Pisces and Cetus on the 17th, and she is moving on the boundaries of Aries and Cetus on the 19th; she enters Taurus on the 19th, crosses the Milky Way on the 21st, enters Gemini on the 22nd, Cancer on the 23rd, Leo on the 25th, and Virgo on the 27th.

She is above the horizon when the sun is below; during the morning hours, from the 15th to the end of the month; and during the evening hours, from the 6th to the 22nd.

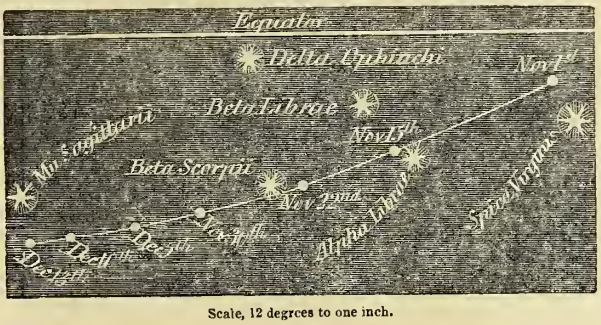
She is on the Equator on the 1st; at her extreme south position on the 8th: crosses the Equator on the 16th; at her extreme north position on the 22nd; and is again on the Equator on the 29th, going southward.

She is near Jupiter on the 1st; Mercury on the 2nd; Mars on the 4th; Venus on the 7th; Saturn on the 16th; Uranus on the 17th; and Jupiter on the 29th.

MERCURY is in the constellation Virgo till the 8th; in Libra from the 9th to the 23rd; in Scorpio from the 24th to the 27th; and he moves on the boundaries of Scorpio and Ophiuchus to the end of the month.

He is a morning star till towards the end of the month. He rises on the 1st at 5h. 19m.; on the 10th, at 6h. 6m.; and on the 25th, at 7h. 30m. The Sun on these days rises 1h. 37m., 1h. 4m., and 6m. after the planet. The planet rises on the 1st, at the E. by S.; on the 12th, at the E.S.E.; and on the 25th, at the S.E. by E. points of the horizon. He moves eastward among the stars during the month; is near the Moon on the 2nd, and Mars on the 28th. The position they occupy in the heavens at these times will be seen by reference to the annexed diagram, showing the path of Mercury in the heavens.

PATH OF MERCURY FROM NOVEMBER 1 TO DECEMBER 13, 1850.



Scale, 12 degrees to one inch.

VENUS is in the constellation Scorpio throughout the month.

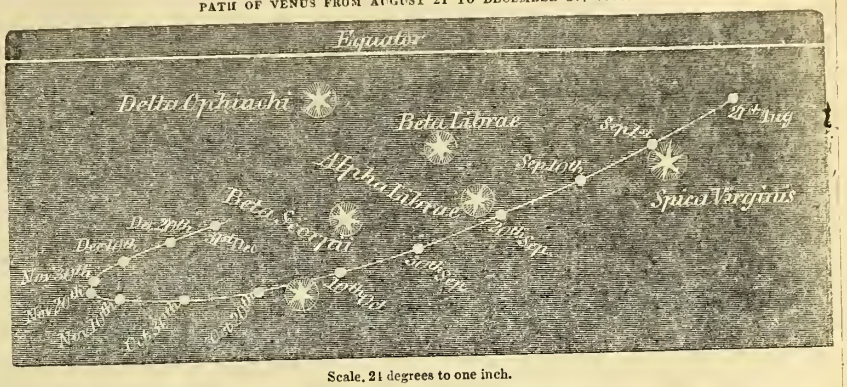
She is an evening star; and sets on the 1st, at 6h. 2m. P.M.; on the 15th, at 5h. 42m. P.M.; and on the last day, at 5h 10m. P.M.: near the S.W. point of the horizon all the month. She moves slowly eastward to the 23rd; is stationary from the the 24th to the 27th; and moves slowly westward among the stars to the 28th. She is at her greatest brilliancy on the 10th; and is near the Moon on the 7th. Her path in the heavens is shown in the annexed engraving; and for her telescopic appearance see next month.

MARS is in the constellation Libra till the 19th; on which day he enters Scorpio. He sets on the 1st, at 4h. 52m. P.M.; and on the last day, at 3h. 47m. P.M. Till the 24th he sets a few minutes after the Sun; and after the 24th, a few minutes before the Sun. He sets near the S.W. by W. point of the horizon; he is moving eastward among the stars; is near the Moon on the 4th, and Mercury on the 28th. His altitude above the horizon when he souths, on the 1st, is 21°¾; and it is 16°½ on the last day.

JUPITER is in the constellation Virgo throughout the month.

He rises on the 1st at 4h. 15m. A.M.; and on the last day at 2h. 51m. A.M., at the E. point of the horizon. His altitude on southing, on the 1st, is 35°¼; and on the last day, is 33°¼. He moves eastward among the stars; is near the Moon on the 1st, and again on the 29th. His path among the stars is shown in the diagram in May.

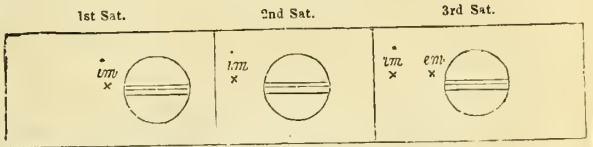
PATH OF VENUS FROM AUGUST 21 TO DECEMBER 31, 1850.



Scale, 24 degrees to one inch.

JUPITER'S SATELLITES.—A few Immersions, of which those of the first, second, and third Satellites are visible. The relative position of the Satellites to Jupiter at the instant of the eclipse is shown in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



SATURN is in the constellation Pisces throughout the month.

He is visible throughout the greater part of the night. He rises before the Sun sets; and sets midway between the W. and W. by N. points of the horizon, on the 1st, at 4h. 46m. A.M.; and on the last day, at 2h. 44m. A.M. He souths at an altitude of 42° nearly. He moves slowly westward among the stars; and is near the Moon on the 16th. See the diagram in September.

URANUS is in the constellation Aries throughout the month.

He sets on the 1st, at 6h. 3m. A.M.; and on the 30th, at 4h. 2m. A.M. He souths at 10h. 4m. P.M., at an altitude of 48°½ on the 15th. He moves slowly westward among the stars; and is near the Moon on the 17th.

NEPTUNE sets on the 1st, at 0h. 55m. A.M.; and on the last day, at 10h. 59m. P.M.

ON THE APPARENT MOTIONS OF THE SUN, MOON, AND PLANETS.

(*Continued from page* 41.)

planets are not always, like those of the Sun and Moon, in the same direction, but that they generally are moving in that direction, viz. from west to east.

Till the planets Mercury and Venus reach their greatest eastern elongation, or those planets, whose distances from the Sun are greater than that of the Earth, reach their eastern quadratures, their apparent motions are from west to east; in the course of a few days afterwards they seem to be stationary among the stars.

(*Concluded on page* 49.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Afternoon	Mars. Afternoon	Jupiter. Morning	Saturn. Afternoon	Uranus. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 47	2 43	0 16	10 1	10 19	7 46
6	10 56	2 38	0 11	9 45	9 59	7 26
11	11 6	2 31	0 6	9 29	9 38	7 6
16	11 18	2 21	Morn.	9 13	9 17	6 46
21	11 30	1 7	11 56	8 57	8 56	6 26
26	11 42	1 49	11 51	8 40	8 36	6 6
30	11 53	1 31	11 48	8 27	8 20	5 50

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.	3rd Sat. Immersion.
D. H. M.	D. H. M.
23 4 42 A.M.	15 6 7 A.M.
30 6 36 A.M.	
2nd Sat.	
15 5 37 A.M.	

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		H. M.		
A Star	6	7 6 29 P.M.	Bright	1° S. &
		7 6 45 P.M.	Bright	60° N.
33 Sagittarii	6	8 5 8 P.M.	Dark	25° N. &
		8 6 23 P.M.	Bright	68° N.
45 Aquarii	6	12 9 25 P.M.	Dark	20° N. &
		12 10 3 P.M.	Bright	76° N.
Chi 3 Orionis	5	21 9 10 P.M.	Bright	12° N. &
		21 10 5 P.M.	Dark	78° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	D.	H.	M.		
NEW MOON ..	4	2	40	A.M.	
FIRST QUART.	11	11	15	P.M.	
FULL MOON	19	4	35	P.M.	
LAST QUART.	26	0	32	P.M.	
APOGEE ..	11	2		P.M.	
PERIGEE ..	23	3		P.M.	

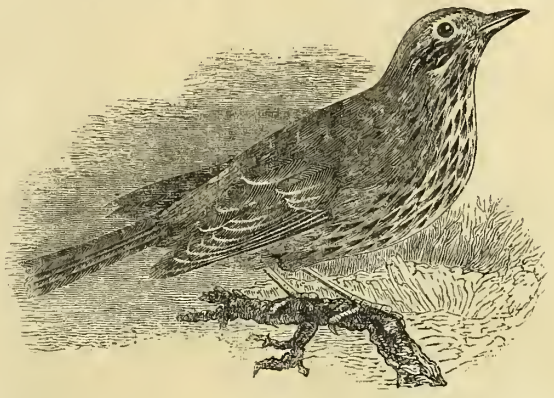
RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination South	VENUS Right Ascension	VENUS Declination South.	MARS Right Ascension	MARS Declination South.	JUPITER. Right Ascension	JUPITER. Declination South.	SATURN. Right Ascension	SATURN. Declination North	URANUS. Right Ascension	URANUS. Declination North.	NEPTUNE. Right Ascension	NEPTUNE. Declination South.
	H. M. S.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′
1	13h. 28m	7° 6′	17h 25m	27° 51′	14h. 58m	17° 0′	12h. 42m	3° 19′	1h. 3m	3° 43′	1h. 45m	10° 13′	22h. 26m	10° 38′
6	13 57	10 15	17 39	27 58	15 12	17 1	12 46	3 42	1 2	3 36	1 44	10 9	22 26	10 38
11	14 28	13 24	17 52	27 54	15 27	18 59	12 50	4 5	1 0	3 30	1 43	10 5	22 26	10 37
16	14 59	16 21	18 2	27 37	15 41	19 52	12 53	4 27	0 59	3 24	1 42	10 1	22 26	10 35
21	15 30	19 0	18 7	27 10	15 56	20 42	12 57	4 48	0 58	3 20	1 42	9 57	22 26	10 32
26	16 3	21 16	18 9	26 30	16 11	21 26	13 0	5 8	0 58	3 16	1 41	9 54	22 26	10 30

NOVEMBER.—WHALE FISHING.

NOTES ON NATURAL HISTORY.—NOVEMBER.

The 1st of November is All Saints' Day; and the night before, which is called Allhallow E'en, is celebrated by various rural sports and modes of divination. With the commencement of November, however, the gaiety of nature seems to cease. Among birds, however, November is a gayer month than July and August; for, in November, many of them sing as agreeably as in early spring. In this month most of the summer birds take their departure, but the winter birds arrive to take their places. Among these winter birds, one of the best songsters is the redwing, which arrives in flocks from the north and north-east of



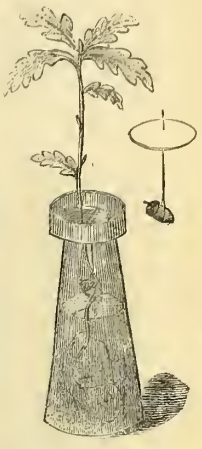
REDWING.

Europe, not later than the first week in November, arriving generally a week or two before the fieldfare; and, when the winters are severe, Mr Yarrell informs us that it has been observed "that the redwings are unable to bear hard weather so well as the fieldfares. While in this country, the redwings inhabit parks and pleasure-grounds that are ornamented with clumps of trees; and, like the common thrush, which they most resemble in their external appearance, they seek their subsistence in mild and open weather in pasture lands and moist meadows, feeding principally on worms, snails, and other soft-bodied animals. They are much less inclined to feed on berries than most of the thrush tribe; and, should the resources usually obtained by their search on the ground be closed against them by long-continued frost and snow, the redwings are the first among birds to suffer; and during some severe seasons, such as 1799, 1814, and 1822, hundreds have been found almost starved, alike unable to prosecute their journey farther south to more congenial countries, or to bear the rigour of this." The song of the redwing is generally allowed to be very beautiful; and Linnæus, several times in his *Tour in Lapland*, mentions the song of the redwing, "whose amorous warblings from the top of a spruce fir," he says, "were delightful; its high and varied notes rivalling those of the nightingale herself." Other writers praise the "delightfully wild notes" of this bird, and mention that in Sweden and Norway, where it breeds, it is excessively shy when any one approaches its nest.

Oysters are in perfection in this month. They are generally found fixed to a rock, or some other submarine object, apparently enjoying only the nourishment brought by the waves, and scarcely giving any sign of life except by the opening and shutting of the valves. The oysters adhere to stones and other objects by means of a mucilaginous liquid with which they are covered as soon as they are formed, and which seems to be of the same nature as that with which they increase their shells. In some places, particularly at the mouths of the great African rivers, where there are great quantities of mangrove trees growing with their trunks several feet deep in the water, great quantities of oysters are found attached to the roots and lower branches of the trees; so that, as Mrs. Lee tells us, it is by no means an uncommon occurrence to send a slave to cut off a branch or two of the tree-oyster to furnish a meal. She adds, that these oysters, which are generally very small, are remarkably delicate in their flavour. Oysters are also often found fixed to the backs of crustaceous animals—such as crabs and lobsters; and occasionally to the shells of other molluscous animals. As oysters belong to that class of molluscous animals which are furnished with two muscles attaching them to their shells, they can shut the valves with great force, and compress them close with extraordinary tenacity. Several curious stories are told of monkeys being caught by oysters in this manner; and on one occasion, it is said that a cat, having ventured on the sea shore at low water, and having attempted to seize an oyster fixed firmly to a rock, was caught by the oyster closing the valves of its shell the moment it was pricked by the claw of the cat, and held there till it was drowned by the coming in of the tide.

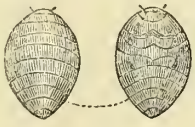
The fieldfare, which is very nearly allied to the redwing, appears later in the season, arriving in large flocks, which spread themselves over the whole country, covering the pasture lands, and particularly the neighbourhood of rickyards, in search of worms and slugs, or any other soft bodied animals that they can find, though on the appearance of frost and snow they fly to the hedges and feed upon any berries they can find. The call note of the fieldfare is very harsh; and though its song is harmonious, it is very inferior in beauty to that of the redwing. The common song thrush remains in England all the year, and it feeds principally on insects, worms, and snails, picking the latter off the walls or trees on which they have fixed themselves to pass the winter, and breaking the shell very adroitly by beating it against a stone or a wall.

At this season, when the summer flowers are all over, and the ground is frequently covered with snow, there is scarcely anything left in the open air to interest the lover of a garden. It is true there is the resource of greenhouse plants; but plants in pots, when kept in a room, have generally an unhealthy appearance, as they are seldom set out in the open air, and they are kept continually in an atmosphere which is highly injurious to them. At this season, therefore, it is very desirable to try experiments on vegetation, and the method which has been discovered of raising plants in hyacinth-glasses affords a very agreeable substitute for the interest which is felt in spring by the amateur gardener in watching the developement of vegetation in the open air. It is not exactly known with whom the idea of raising plants in this manner first originated, but it has been practised for some years, as some ladies residing near Epsom had, in 1835, eaten nuts from hazel bushes which they had reared in glasses, and afterwards planted out into the open ground. The mode of managing acorns in hyacinth-glasses is thus given in the *Field Naturalist* for April, 1833:—"Let a common hyacinth-glass, or other glass if more convenient, be filled about half or a third part full of water; and a piece of card be prepared as a cover for the opening of the glass, so as to fit close and exclude the air. Fasten a strong thread or a piece of brass wire round an acorn—not iron wire, for it will rust and corrode the acorn, and frustrate the experiment. Suspend the thread or brass wire from the card, or from a small transverse bar of wood or metal beneath it, so that the acorn may be sustained at a short distance above the surface of the water, but near enough for the steam, which will be generated by the glass being kept in a warm room, to be communicated to the acorn, from which it will depend in a large drop. In a few weeks the germ will be found to burst the shell of the acorn; and in about a fortnight afterwards, the radicle, or little root, will protrude itself through the cleft, and take a downward direction into the water, where it will be continually extended and enlarged, by degrees throwing out external fibres, until, after a few days more, the other member of the germ will be seen to rise upwards till it comes near the card that covers the vessel, through which a hole must be cut to allow of its free passage. This forms the stem of the tree, which will shortly be seen to throw out two cotyledons, or seed leaves, at its extremity, and shortly again other leaves; till, in the course of a few weeks from the commencement of the experiment, the tree will have grown to the height of several inches, and be ornamented at its top with leaves two or three inches long, and wide in proportion, besides smaller ones breaking out at its sides, the root meanwhile having continued growing to a length exceeding that of the stem." In the year 1842, an account of this method of growing oaks was given in Paxton's *Magazine of Botany*, substituting a piece of cork for the card, and thread for the brass wire. In all other respects the experiment was the same. Supposing the acorn to be put into the glass in November, it will probably begin to germinate in January, or sooner, according as the acorn was fresh or old. If the acorn were but just gathered when it was put in, it will probably begin to germinate in the course of a month or six weeks at farthest; but if it were an acorn of the previous year, it would most probably not show any signs of life for a couple of months, or even more. The great point to be attended to is, keeping the cavity in the upper part of the glass above the water firmly closed, so as to prevent any evaporation of the water into the open air, since it will be impossible for the acorn to germinate unless the moisture which rises from the water is condensed and thrown back upon it; for it must be observed that air and moisture are both essential to germination, and that if the acorn is suffered to be in the water the air cannot have access to it so as to make it grow. Many instances, indeed, have been known of seeds having remained under water for several years without vegetating; but which, the moment they were exposed to the air, began to grow: while, on the other hand, seeds, when kept perfectly dry, though they are exposed to the influence of the air, will remain an extraordinary length of time without germinating.

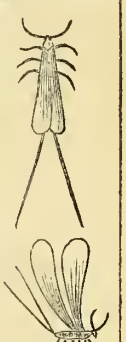


GERMINATION OF AN ACORN IN WATER.

Among the many interesting plants grown in the Botanic Garden at Kew, may be mentioned the *Opúntia cochinillífera*, a kind of Indian fig, which is often attacked by a species of *Cóccus*, which, when dried, forms the scarlet dye which we call cochineal. This Indian fig is very common in Mexico, where it is called the Nopal-tree, and where it is considered of so much consequence, from the value of the insects bred upon it, that it is introduced in the arms of the Republic. The *Opúntia* is a species of *Cáctus*, with large, flat, roundish, leaf-like stalks, which produce the flowers and fruit, without the tree bearing any leaves properly so called. On these flat, leaf-like stalks, which are extremely succulent, there often anpears a white woolly substance, resembling what is called the American blight on apple-trees; and this woolly substance is the covering of the female cochineal insect, which is the insect used for the dye. When fully grown, these insects are collected in Mexico and other countries where the plant grows in great abundance, by women, who brush them off with the tail of a squirrel or a deer. They are then killed by dipping them in boiling water, or exposing them to heat in ovens or the sun, and are then ready for sale. The cochineal insect was formerly confined to Mexico; but, in the beginning of the year 1777, M. Thierry de Menonville was employed by the French Government to procure some of the insects from Mexico, for the purpose of introducing them into the French West India Islands—an enterprise for which four thousand livres had been allotted by the French Government. M. Thierry de Menonville "proceeded by the Havannah to la Vera Cruz, and was there informed that the finest cochineal insect were produced at Guaxaca, distant about seventy leagues. Pretending ill-health, he obtained permission to use the baths of the river Magdalena; but, instead of going thither, he proceeded, through various difficulties and dangers, as fast as possible to Guaxaca, where, after making his observations, and obtaining the requisite information, he affected to believe that the cochineal insects were highly useful in compounding an ointment for his pretended disorder (the gout), and therefore purchased a quantity of Nopals covered with these insects, of the fine or domestic breed, and putting them in boxes with other plants, for their better concealment, he found means to get them away as botanic trifles, unworthy of notice, notwithstanding the prohibitions by which the Spanish Government had endeavoured to hinder their exportation; and being afterwards driven by a violent storm into the bay of Campeachy, he there found, and added to his collection, a living *Cáctus*, of a species which was capable of nourishing the fine domesticated cochineal. After which, departing for St. Domingo, he arrived safely with his acquisitions, on the 25th of September in the same year, at Port-au-Prince." The insects thus introduced succeeded so well, that, in ten or twelve years, St Domingo became a powerful rival to Mexico in the production of the cochineal; but, during the political troubles of St. Domingo which followed the French Revolution, the plantations were destroyed. The value of the cochineal exported from Mexico is said by Humboldt to be about £500,000 annually. It is the female insect only from which the dye is taken; and the male insect has wings.



THE FEMALE OF THE COCHINEAL INSECT (COCCUS CACTI).



THE MALE OF THE COCHINEAL INSECT.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 6h. 8h. 10h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	1st S. in Advt.	7 46	10 47	16¾	3 53	4 42	10 2	28¼	3 12		27		No Tide.	0 20	335
2	M	Length of day 8h 4m	7 48	10 24	16½	3 52	5 54	10 51	24¼	3 39		28		0 45	1 10	336
3	Tu	Length of night 15h 56m	7 48	10 0	16¼	3 52	7 4	11 41	21	4 12		☌		1 30	1 55	337
4	W	Day breaks 5h 45m	7 49	9 36	16¼	3 51	8 9	Afternoon	19	4 51		1		2 10	2 30	338
5	Th	Twilight ends 5h 56m	7 51	9 11	16¼	3 51	9 9	1 23	18	5 35		2		2 50	3 10	339
6	F	*Nicholas*	7 52	8 46	16	3 51	10 1	2 13	17¾	6 26		3		3 30	3 45	340
7	S	Fomalhaut souths 5h 45m P.M.	7 53	8 20	15	3 50	10 44	3 2	18¾	7 23		4		4 5	4 20	341
8	S	2d S. in Advent.	7 54	7 54	15¾	3 50	11 21	3 49	21¼	8 22		5		4 40	5 0	342
9	M	[Concept. of B. V. Mary.	7 56	7 27	15¾	3 50	11 51	4 34	23	9 25		6		5 15	5 35	343
10	Tu	Alpha Pegasi souths 5h 41m P.M.	7 57	7 0	15¾	3 49	Afternoon	5 19	26¾	10 30		7		5 55	6 15	344
11	W	Alpha Andromedæ souths 5h 40 P.M.	7 58	6 32	15¾	3 49	0 39	6 2	30¾	11 34		☽		6 40	7 0	345
12	Th	Alpha Arietis souths 8h 33m P.M.	7 59	6 4	15½	3 49	1 1	6 45	35	Morning.		9		7 30	8 0	346
13	F	*Lucy*	8 0	5 36	15½	3 49	1 20	7 28	39½	0 40		10		8 35	9 10	347
14	S	Alpha Ceti souths 9h 21m P.M.	8 0	5 7	15¼	3 49	1 43	8 14	44	1 47		11		9 45	10 15	348
15	S	3d S. in Advent	8 1	4 39	15¼	3 49	2 6	9 1	48½	2 57		12		10 50	11 20	349
16	M	Camb. Term ends	8 2	4 9	15¼	3 49	2 33	9 52	52½	4 10		13		11 50	No Tide.	350
17	Tu	Oxford T. ends	8 3	3 40	15¼	3 49	3 6	10 47	56	5 24		14		0 10	0 35	351
18	W	*Ember Week*	8 4	3 11	15	3 50	3 49	11 45	58¼	6 39		15		0 55	1 20	352
19	Th	Day decreased 8h 50m	8 5	2 41	15	3 50	4 36	Morning.	—	7 51		●		1 40	2 5	353
20	F	Pleiades souths 9h 41m P.M.	8 5	2 11	15	3 51	5 37	0 46	59¼	8 57		17		2 30	2 50	354
21	S	*St. Thomas*	8 6	1 41	15	3 51	6 50	1 47	58¾	9 50		18		3 15	3 35	355
22	S	4th S. in Advent	8 6	1 12	15	3 51	8 7	2 48	56¾	10 37		19		3 59	4 25	356
23	M	[Shortest day	8 6	0 42	15	3 51	9 26	3 46	53¼	11 12		20		4 45	5 10	357
24	Tu	Length of day 7h 45m	8 7	0 12	15	3 52	10 44	4 41	49	11 42		21		5 35	6 5	358
25	W	Christmas Day	8 7	After 12 o'clock.	15	3 52	Morning.	5 33	44	Afternoon		☾		6 30	6 55	359
26	Th	*St. Stephen*	8 8	0 48	15¼	3 53	0 2	6 23	39¼	0 30		23		7 25	7 55	360
27	F	*St. John*	8 8	1 18	15¼	3 54	1 17	7 11	34¼	0 52		24		8 30	9 5	361
28	S	*Innocents*	8 9	1 48	15¼	3 55	2 31	7 59	29¾	1 17		25		9 40	10 15	362
29	S	1st S. aft. Chris	8 9	2 17	15¼	3 56	3 43	8 47	25½	2 42		26		10 50	11 25	363
30	M	Aldebaran souths 9h 51m P.M.	8 9	2 46	15¼	3 57	4 53	9 36	22¼	3 12		27		11 55	No Tide.	364
31	Tu	*Silvester*	8 9	3 16	15½	3 58	5 59	10 26	19¾	3 49		28		0 25	0 45	365

DECEMBER.

The Sun is situated south of the Equator, and on the 22nd day attains his extreme south position. From the 23rd day he is moving northward. He passes from the sign Sagittarius to Capricornus, completing the tropical year, on the 22nd day, at 3h. 38m. A.M., having been in the former sign 29 days, 12 hours, and 31 minutes. On the 1st day he is 93,636,000 miles from the Earth; and this distance decreases to 93,412,000 miles by the 31st.

The Moon enters Libra on the 1st; Scorpio on the 2od; Ophiuchus on the 3rd; Sagittarius on the 5th; Capricornus on the 7th; Aquarius on the 9th; Pisces on the 11th; Cetus on the 12th. She is near Pisces, Cetus, and Aries till the 16th, on which day she enters Taurus; crosses the Milky Way on the 19th; Gemini on the 19th; Cancer on the 21st; Leo on the 22nd; Virgo on the 24th, Libra on the 28th; and Ophiuchus on the 30th.

She is above the horizon when the Sun is below, during the morning hours, from the 17th to the 25th; and, during the evening hours, from the 6th to the 18th.

She reaches an extreme south position on the 5th; crosses the Equator on the 13th, going northward, and reaches an extreme north position on the 20th; then begins to move southward; crosses the Equator on the 26th; and almost reaches an extreme south position on the last day.

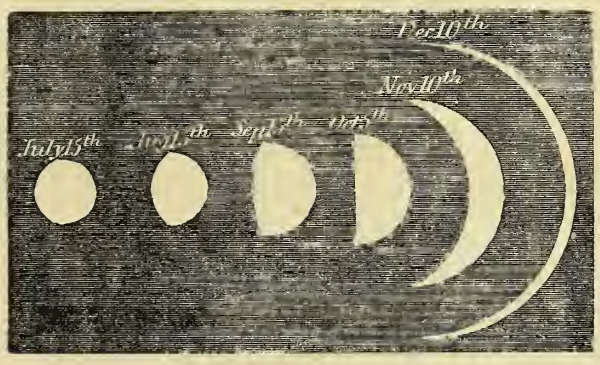
She is near Mars and Mercury on the 3rd; Venus on the 5th; Saturn on the 13th; Uranus on the 14th; Jupiter on the 26th; and Venus on the 31st.

Mercury moves on the boundaries of Scorpio and Ophiuchus to the 7th; and he is in Sagittarius from the 8th to the end of the year.

He sets with the Sun for the first few days; and he is an evening star towards the middle and end of the month. He sets, on the 15th, at 4h. 14m.; and on the last day at 5h. 23m. The Sun sets on these days 25m. and 1h. 25m. respectively before the planet sets. He sets, throughout the month, nearly midway between the S.W. by W. and the S.W. points of the horizon. He moves eastward among the stars during the month; is near the Moon on the 3rd; and Venus on the 15th. His path in the heavens till the 13th of this month is shewn in the diagram in last month; after this time, his rapidity of motion towards the east continues about the same; on the 15th, he reaches his lowest point; and after this time his motion is towards the Equator, or upwards.

Venus is in the constellation Sagittarius till the 22nd; and in that of Scorpio till the 23rd.

TELESCOPIC APPEARANCE OF VENUS FROM JULY TO DECEMBER, 1850.



Scale, 40 seconds of arc to one inch.

She is an evening star at the beginning of the month; and sets, on the 1st, at 5h. 4m. P.M.; and, on the 18th, at the same time as the Sun, about midway between the S.W. by W. and S.W. points of the horizon. She is moving slowly westward among the stars; is near the Moon on the 5th; Mercury on the 12th; Mars on the 20th; and the Moon again on the 31st. She is in inferior conjunction with the Sun on the 16th. Her path in the heavens is shewn in the diagram of last month; and her telescopic appearance at the beginning of the month is shewn in the above engraving: towards the end of the month her appearance will be the same as at the beginning of the month, except that the crescent will be in the opposite direction.

Mars is in the constellation Scorpio till the 18th; on this day he passes into Sagittarius.

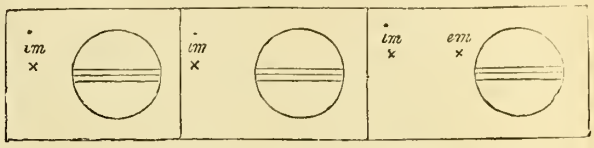
He rises and sets throughout the month very nearly at the same time as the Sun rises and sets; and he is, therefore, unfavourably situated for observation. He is moving eastward among the stars; is near the Moon on the 3rd, and Venus on the 20th. His altitude above the horizon when he souths, on the 1st, is 16°⅔; and on the last day is 14°⅔ nearly.

Jupiter is in the constellation Virgo throughout the month.

He rises, on the 1st, at 2h. 48m. A.M.; and, on the the last day, at 0h. 16m. A.M., midway between the E. and the E. by S. points of the horizon. His altitude on southing, on the 1st, is 33°; and, on the last day, is 31°⅔. He moves slowly eastward among the stars, and is near the Moon on the 26th. His path in the heavens is shewn in the diagram in May.

Jupiter's Satellites.—A few eclipses are visible. The relative position of the Satellites to Jupiter at the instant of the eclipse is shewn in the annexed diagram, as viewed through an inverting telescope.

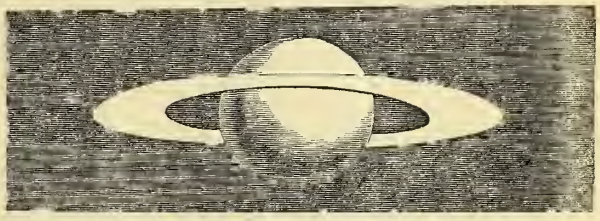
RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



Saturn is in the constellation Cetus throughout the month.

He is an evening star; and sets, on the 1st, at 2h. 40m. A.M.; and on the last day at 42m. after midnight. He souths at an altitude of 41°¾ nearly. He is almost stationary among the stars, and is near the Moon on the 13th. His position in the heavens is shewn in the diagram in September. The ring has opened a good deal during the year; and the telescopic appearance of the planet is shewn in the annexed diagram.

TELESCOPIC APPEARANCE OF SATURN IN DECEMBER, 1850.



Scale, 20 seconds of arc to one inch.

Uranus is in the constellation Pisces throughout the month.

He sets, on the 1st, at 3h. 58m. A.M.; and, on the 31st, at 2h. 1m. A.M. On the 15th, he souths at 8h. 3m. P.M., at an altitude of 48°¼. He is near the Moon on the 14th.

Neptune sets, on the 1st, at 10h. 54m. P.M.; and, on the last day, a 8h. 58m. P.M.

ON THE APPARENT MOTIONS OF THE SUN, MOON, AND PLANETS

(*Concluded from page* 45.)

After a few days more, their apparent motion is in the opposite direction, or from east to west. In this case the motion is said to be retrograde; this movement is slow at first, but is continually increasing in velocity till the planet (Mercury or Venus) is in inferior conjunction; or, in the case of the superior planets, in opposition; it then gradually decreases, till the planet becomes stationary a second time; after which it begins to move from west to east, or to have direct motion, as before, and proceeds to pass through another series of similar motions. The retrograde motion is not of long continuance.

The general phenomena presented by the motions of the planets may be briefly stated to be as follows:—That, through the greater parts of their orbits, they move from west to east—that is, from the time of reaching their western elongation or quadratures, to the time of reaching their eastern extremes; having been in conjunction with the Sun in the meantime, becoming stationary, then moving from east to west, and forming at every succeeding opposition a kind of loop. (See the various diagrams.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month	Mercury. Morning.	Venus. Afternoon	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon	Neptune. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H M.
1	11 56	1 26	11 47	8 24	8 16	5 46
6	After.	1 0	11 43	8 7	7 56	5 26
11	0 25	0 30	11 39	7 50	7 36	5 6
16	0 40	Morn.	11 35	7 34	7 16	4 44
21	0 55	11 25	11 31	7 16	6 56	4 27
26	1 9	10 56	11 28	6 59	6 37	4 7
31	1 21	10 29	11 25	6 42	6 17	3 48

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.			3rd Sat. Im. I.		Emer. E.
D.	H.	M.	D.	H.	M.
16	4	52 A.M.	21	4	38 A.M. E.
23	6	45 A.M.	28	5	55 A.M. I.
32	3	7 A.M.			

2nd Sat. Immersion.		
17	5	5 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
A Star	4	15 8 20 P.M.	Dark	9° S. &
		15 9 10 P.M.	Bright	66° N.
f Tauri	5	16 3 54 P.M.	Dark	28° N &
		16 4 48 P.M.	Bright	90° N.
75 Tauri	6	17 4 33 P.M.	Dark	25° N. &
		17 5 28 P.M.	Bright	90° N.
Chi 2 Orionis	6	19 5 25 A.M.	Bright	3° N. &
		19 5 51 A.M.	Bright	64° N.

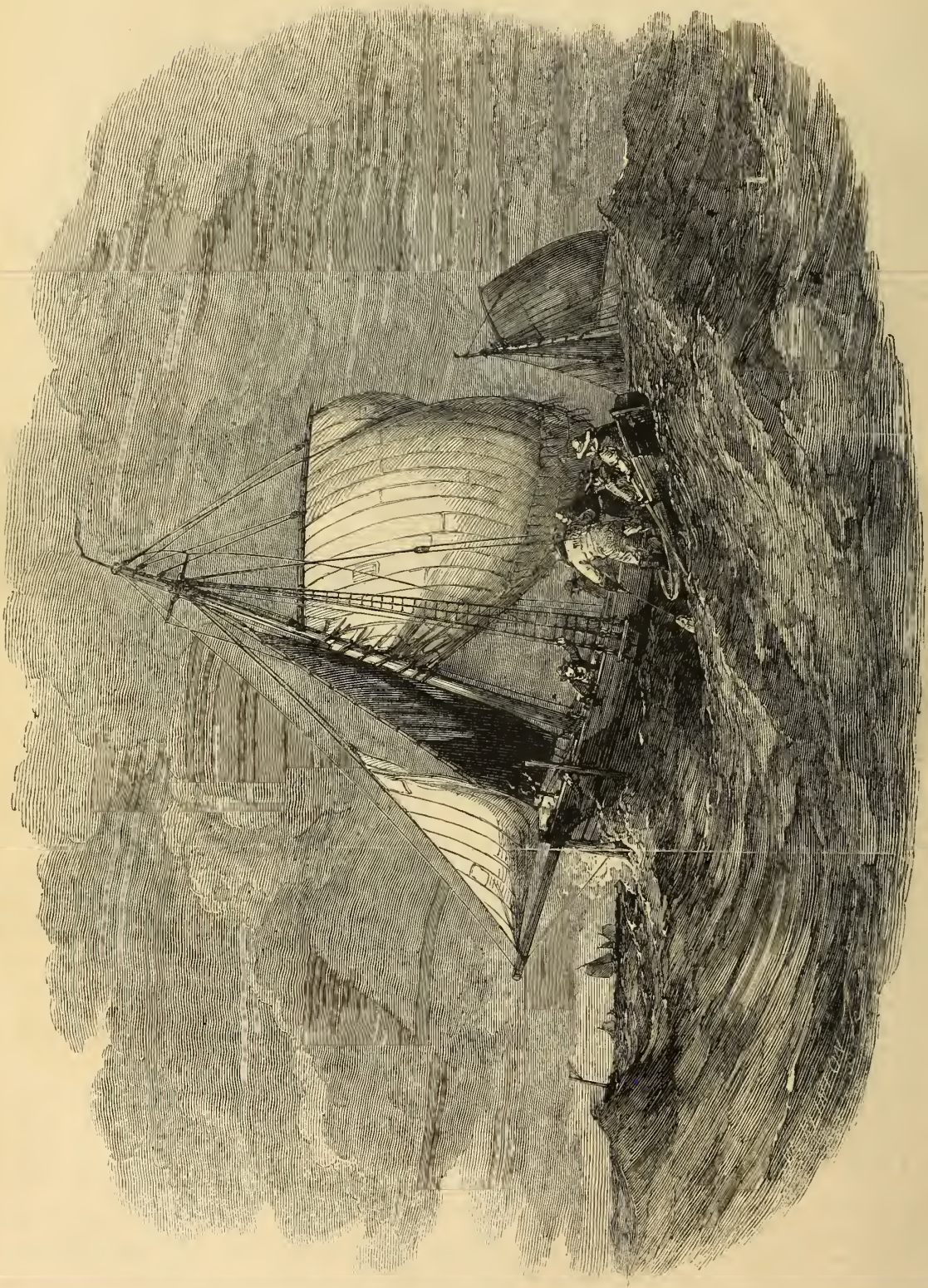
TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

New Moon ..	3D.	5H.	16M.	P.M.
First Quarter	11	8	37	P.M.
Full Moon ..	19	5	3	A.M.
Last Quarter	25	9	24	P.M.
Apogee	9	11		A.M.
Perigee	21	6		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination South.	VENUS. Right Ascension	VENUS. Declination South.	MARS. Right Ascension	MARS. Declination South.	JUPITER. Right Ascension	JUPITER. Declination South.	SATURN. Right Ascension	SATURN. Declination North.	URANUS. Right Ascension	URANUS. Declination North.	NEPTUNE. Right Ascension	NEPTUNE. Declination South.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	16h. 36m	23° 6′	18h. 7m	25° 38′	16h. 27m	22° 6′	13h. 3m	5° 27′	0h. 57m	3° 13′	1h. 41m	9° 51′	22h. 26m	10° 39′
6	17. 10	24 27	18 0	24 34	16 42	22 41	13 6	5 45	0 57	3 12	1 40	9 48	22 26	10 38
11	17 44	25 16	17 49	23 19	16 58	23 10	13 9	6 2	0 56	3 11	1 40	9 46	22 27	10 37
16	18 19	25 30	17 36	21 56	17 14	23 34	13 12	6 18	0 56	3 11	1 39	9 44	22 27	10 35
21	18 54	25 6	17 24	20 32	17 30	23 51	13 15	6 33	0 56	3 13	1 39	9 43	22 27	10 33
26	19 28	24 4	17 14	19 19	17 46	24 2	13 17	6 46	0 56	3 16	1 39	9 42	22 28	10 30



DECEMBER.—COD FISHING.

NOTES ON NATURAL HISTORY.—DECEMBER.

In December, the robin redbreast and the wren are almost the only birds that are found cheerfully hopping about near dwelling-houses. The robin, in fact, becomes more familiar at this season ; and, as Thomson beautifully expresses it,—

> The redbreast, sacred to the household gods,
> Wisely regardful of th' embroiling sky,
> In joyless fields and thorny thickets leaves
> His shivering mates, and pays to trusted man
> His annual visit. Half afraid, he first
> Against the window beats; then brisk alights
> On the warm hearth ; then, hopping o'er the floor,
> Eyes all the smiling family askance,
> And pecks, and starts, and wonders where he is:
> Till, more familiar grown, the table crums
> Attract his slender beak.

In Italy, Mr. Waterton informs us, the robin redbreast is used as food ; and he says, in the bird-market near the Rotunda, at Rome, he has counted more than fifty robin redbreasts lying dead on one stall.

The fearful cry of the owl sounds more alarming in winter than at any other season; and the form of the barn owl flitting through the leafless trees has a more striking and ghost-like appearance in winter than it ever can have in summer. "The characters and appearance of owls," says Mr Yarrell, "are so singular and so peculiar, that, once having seen them, they are not readily forgotten. They have but little external beauty of form. The head is large, the expression grotesque, and the body bulky in appearance, though the plumage is soft and downy. Unlike the falcons, which hunt for their food by day, the owls seek their prey during the twilight of morning and evening, and probably during the greater part of the night, if the state of the moon or the atmosphere affords sufficient light for the purpose. From this habit of flying by night, the singular appearance of the bird produced by the arrangement of the feathers of the face, forming a broad circular disk, a peculiar hollow tone of voice, unlike that of any other bird, and the additional circumstance of most of the species selecting ivy-covered ruins of sacred edifices as places of resort, from the solitude and protection the character of such remains afford, owls have been considered by the superstitious as birds of darkness and ill-omen, and by some even as messengers of death." The little Italian owl, or *civetta*, is much prized,

SCOPS-EARED OWL.

Mr. Waterton tells us, "by the gardeners of Italy, for its uncommon ability in destroying insects, snails, slugs, reptiles, and mice. There is scarcely an out-house in the gardens and vineyards of that country which is not tenanted by the *civetta*. It is often brought up tame from the nest; and in the month of September is sold for a dollar to sportsmen, who take it with them in their excursions through the country, to look for larks and other small birds. Perched on the top of a pole, it attracts their notice and draws them within the fatal range of gunshot by its most singular gestures; for, standing bolt upright, it curtsies incessantly, with its head somewhat inclined forwards, whilst it keeps its eyes fixed on the approaching object. This odd movement is peculiar to the *civetta* alone, and by it the birds of the neighbourhood are decoyed to their destruction. Hence its value to the ranging sportsman. Often and anon as the inhabitants of Rome pass through the bird-market at the Pantheon, they stop and look, and laugh at this pretty little captive owl, whilst it is performing its ridiculous gesticulations." The scops-eared owl is very nearly allied to this species, and, though it is most abundant in Italy, it is occasionally to be seen in Great Britain; and on the shores and islands of the Mediterranean it is very abundant; and Mr. Spence, the well-known entomologist, has thus recorded its summer habits in the *Magazine of Natural History*:—"This owl, which in summer is very common in Italy, is remarkable for the constancy and regularity with which it utters its peculiar note or cry. It does not merely 'to the moon complain' occasionally, but keeps repeating its plaintive and monotonous cry of '*Kew, kew*' (whence its Floreutine name of *Chiù*, pronounced almost exactly like the English letter *Q*), in the regular intervals of about two seconds, the livelong night; and till one is used to it nothing can well be more wearisome. Towards the end of April, 1830, one of these owls established itself in the large Jardin Anglais, behind the house where we resided at Florence; and, until our departure for Switzerland, in the beginning of June, I recollect but one or two instances in which it was not constanty to be heard, as if in spite to the nightingales which abounded there, from nightfall to midnight (and probably much later), whenever I chanced to be in the back part of the house, or took our friends to listen to it, and always with precisely the same unwearied cry, and the intervals between each as regular as the ticking of a pen dulum."

At this gloomy season of the year every flower is valuable ; but the Christmas rose, which generally appears in flower about this time, is valuable not only from the absence of other flowers, but for its own intrinsic merits. It is a large, handsome, cup-shaped flower, looking like a single rose, and being either white or a very pale pink ; and though, in the open air, the delicate texture of its flowers is often injured by the frost, or melting snow which so frequently covers the ground at the dreary season when it appears, yet, when grown in a sheltered place, or when the weather chances to be mild, it is as ornamental as any of the flowers of summer. It is a species of hellebore, and its botanic name is *Helléborus níger* (or the black bellebore), from the black skin which covers its fleshy underground stem, or root, as it is commonly called, though there are attached to this fleshy substance abundance of the real or fibrous roots. The plant is used in medicine, but it is poisonous when taken to excess ; and, in fact, its very name of hellebore is taken from two Greek words, signifying deadly food. There are several kinds of hellebore, but the Christmas rose is by far the most ornamental.

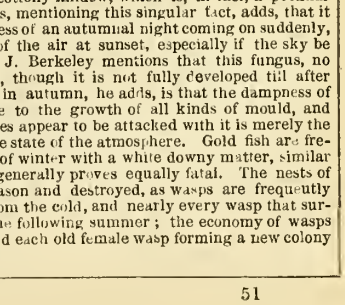
CHRISTMAS ROSE.

The fragrant coltsfoot (*Tussilágo fràgrans*) is another plant which flowers about Christmas ; and it is not only ornamental, but very fragrant. All the kinds of coltsfoot are considered efficacious in colds and coughs ; and, in fact, the Latin name of the genus is derived from *tussis*, a cough.

Among the few other plants in flower at this season may be mentioned the curious variety of hawthorn called the Glastonbury thorn, which is said always to flower exactly on Christmas Day. Of course, this is not the case ; but it is a fact that the plant blossoms again in December, though it has ripe fruit on it from its previous blossoming at the ordinary season in May The legend is, that, in the ancient times, Glastonbury was situated on an island called Avalon ; the waters that surrounded it, and which consisted of a lake communicating with the sea, being now dried up, though where the lake formerly was is still marshy ground. Joseph of Arimathea is said to have come to Britain with his disciples, to preach the Gospel, in the year 36 ; and he having landed on the isle of Avalon, struck his stick into the ground, which immediately took root, budded, and blossomed, being on the Christmas Day ; and, since that time, the plant has always budded and blossomed on Christmas Day. The Glastonbury thorns, which are now common in every part of England, are all taken from an original stock, still existing within the ruins of Glastonbury Abbey ; but it is said that there is another in the neighbourhood, which is much older than the one growing in the ruins, and which blossoms about the same time.

In the New Forest there is an oak which sends forth its leaf-buds about the middle of December, and which, on Christmas Day, has frequently several leaves expanded. They do not, however, long remain, as the country people generally assemble on the Christmas morning and strip the tree of every leaf they can find. The tree is called the Cadenham Oak, and it is said by some to be the identical tree against which the arrow of Tyrrel glanced when it killed William Rufus ; as, in the account given by Camden of the accident, he expressly mentions the early vegetation of the tree which was the occasion of the accident. According to other authors, however, it appears that there is another tree in the Forest which vegetates at the same time as the Cadenham Oak, and which is close to the monument of Rufus. There was, formerly, another very remarkable tree in the New Forest, from the root of which strange noises, like fearful groans, used to issue in the month of December, particularly when the weather was clear and frosty. The tree was a young and vigorous elm ; and the groaning, which was never heard but in the depth of winter, was heard by thousands. It was observed, however, that the tree did not groan when the weather was wet, but only when it was clear and frosty. At length the owner of the tree, a gentleman of the name of Forbes, after trying several experiments, bored a hole in its trunk. "After this it never groaned. It was then rooted up, with a further view to make a discovery ; but still nothing appeared which led to any investigation of the cause. It was, however, universally believed that there was no trick in the affair, but that some natural cause really existed, though never understood."

Almost all the insects which live through the winter are in a torpid state at this season, and most of the moths and butterflies are dead, having left their eggs secured in various ways, so that they may be enabled to bear the cold of winter, and be ready to be hatched in the spring. Thus, the eggs of the lackey-moth, to use the words of Messrs. Kirby and Spence, "are packed as closely as possible to each other, and the interstices are filled up with a tenacious gum, which soon hardens the whole into a solid mass, almost capable of resisting a penknife." The female of the gipsy-moth also crowds her eggs together as closely as she possibly can, and when she has formed them into an oval mass, she covers them with a warm coating of hairs plucked from her own body, which she makes so thick, and fixes on so firmly, as to render the covering equally impervious to cold and wet. Even the *Aphis* coats her eggs over so as to make them appear perfectly black ; and the beetles generally bury theirs to a considerable depth in the ground, instinct teaching them that the frost, which destroys everything exposed to the atmospheric air, never penetrates more than a few inches into the ground. In some few cases moths hybernate, like beetles, in a perfect state, and the December Moth is found occasionally sticking, apparently lifeless, against the trunks of trees. The Herald moth is also occasionally seen at this season, and it is so torpid that it will suffer itself to be taken in the hand without making any effort to escape. Even when a finger is put near it, it only moves its head and antennæ a little, without attempting to fly away. A moth of this species was observed by the Rev. Leonard Jenyns to remain in a torpid state upwards of seven month. The most remarkable insect, however, seen at this season, is the one known in the south of Scotland by the name of the Devil's Butterfly; and which, in various parts of England, is called the Witch's Butterfly, as it may be seen on the wing on fine sunshiny days during the whole of the winter. The true name of this butterfly is the small tortoise-shell (*Vanéssa úrticæ*) ; and its caterpillars, which feed on the nettle, are nearly black, with four bright yellow stripes, two along the back and one on each side, the whole body being covered with fine branched spines. The pupa of this caterpillar is very curious, looking like a lady with an old-fashioned hood, and being always suspended by a thread. There appear to be at least two broods of this insect every year—one being hatched in June, and the other in the latter end of October. It is very common in the south of Europe, and particularly in Italy.



SMALL TORTOISE-SHELL BUTTERFLY.

The common house-fly is subject to rather a singular disease at this season; and flies are often found sticking to the leaves of ivy and other evergreens—the flies, though they appear to be alive, being quite dead, and adhering to the leaf by a kind of cottony mildew, which is, in fact, a peculiar sort of fungus. The Rev. L. Jenyns, mentioning this singular fact, adds, that it seems owing to the chill and dampness of an autumnal night coming on suddenly, as at this season the temperature of the air at sunset, especially if the sky be clear, falls rapidly. The Rev. M. J. Berkeley mentions that this fungus, no doubt, attacks the fly while living, though it is not fully developed till after death. The reason why it prevails in autumn, he adds, is that the dampness of the air at that season is favourable to the growth of all kinds of mould, and that the suddenness with which flies appear to be attacked with it is merely the rapid growth of the fungus, from the state of the atmosphere. Gold fish are frequently attacked at the beginning of winter with a white downy matter, similar to that found on flies, and which generally proves equally fatal. The nests of wasps may be sought for at this season and destroyed, as wasps are frequently found in them in a torpid state from the cold, and nearly every wasp that survives the winter will form a nest the following summer ; the economy of wasps being different from that of bees, and each old female wasp forming a new colony of her own.

A TABLE, SHOWING THE TIMES OF SUN-RISING AND SUN-SETTING, AND THE LENGTH OF THE DAY, AT ALL PLACES IN ENGLAND, SCOTLAND, IRELAND, AND WALES.

Month and Day.	Lizard Point, Falmouth, Penzance, Truro.			Dartmouth, Plymouth, Dartmoor, Launceston, Isle of Wight, Poole, Dorchester, Sidmouth, Weymouth, Exeter, Totness.			Dover, Southampton, Folkstone, Winchester, Brighton, Chichester, Hastings, Hythe, Tunbridge Wells, Tilford, Salisbury, Shaftesbury, Taunton, Bridgewater, Barnstaple.			Ramsgate, Margate, Canterbury, Chelmsford, Maidstone, Rochester, Romford, London, Croydon, Sheerness, Gravesend, Richmond, Windsor, Wallingford, Eaton, Oxford, Reading, Maidenhead, Marlborough, Bath, Bristol, Newport, Cardiff, Pembroke, Kinsale, Pembroke.			Harwich, Northampton, Worcester, Colchester, Ipswich, Buckingham, Gloucester, Cambridge, Royston, Worcester, Bedford, Hereford, Cork, Cardigan, Dungarvon, Waterford, Killarney, Brecon, Cheltenham, Valentia.			Lowestoffe, Yarmouth, Norwich, Huntingdon, Ely, Peterborough, Birmingham, Shrewsbury, Kidderminster, Litchfield, Coventry, Leicester, Montgomery, Wexford, Aberystwith, Clonmel, Enniscorthy, Kilkenny, Cashel, Limerick.			Cromer, Wells, Lynn, Lincoln, Nottingham, Stafford, Chester, Derby, Caernarvon, Bin, Denbigh, Wicklow, Athy, Clare.			Grimsby, Gainsborough, Hull, Sheffield, Leeds, Doncaster, Stockport, Huddersfield, Wakefield, Manchester, Liverpool, Dublin, Athlone, Tuam, Beaumaris, Galway.			Flamborough, York, Kirkby Lonsdale, Knaresbro', Lancaster, Preston, S. of Isle of Man, Newry, Dundalk, Cavan, Castlebar.		
	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.
	Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.	
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
January 1	8 1	4 7	8 6	8 3	4 5	8 2	8 6	2	7 56	8 8	4 0	7 52	8 11	3 57	7 46	8 14	3 54	7 40	8 17	3 51	7 34	8 20	3 49	7 29	8 22	3 45	7 24
11	7 58	4 18	8 20	8 0	4 16	8 15	8 3	4 13	8 10	8 5	4 11	8 6	8 7	4 9	8 2	8 9	4 7	7 58	8 12	4 5	7 53	8 14	4 3	7 49	8 17	4 0	7 43
21	7 51	4 33	8 42	7 53	4 31	8 38	7 55	4 29	8 34	7 56	4 28	8 32	7 58	4 26	8 28	8 0	4 24	8 24	8 2	4 22	8 20	8 5	4 20	8 15	8 7	4 17	8 10
February 1	7 37	4 51	9 14	7 39	4 49	8 11	7 40	4 48	9 8	7 42	4 47	9 5	7 43	4 45	9 2	7 45	4 43	8 58	7 47	4 41	8 54	7 49	4 39	8 50	7 51	4 37	8 46
11	7 20	5 9	9 49	7 21	5 7	9 46	7 22	5 6	9 44	7 23	5 4	9 41	7 25	5 3	9 38	7 26	5 2	9 36	7 27	5 1	9 34	7 28	5 0	9 32	7 30	4 58	9 28
21	7 2	5 26	10 24	7 3	5 25	10 22	7 4	5 24	10 20	7 5	5 23	10 18	7 6	5 22	10 16	7 6	5 22	10 16	7 7	5 21	10 14	7 8	5 20	10 14	7 9	5 19	10 10
March .. 1	6 46	5 40	10 54	6 46	5 40	10 53	6 47	5 39	19 52	6 48	5 40	10 52	6 49	5 37	10 48	6 49	5 37	10 48	6 50	5 36	10 46	6 50	5 36	10 46	6 51	5 35	10 44
11	6 25	5 55	11 30	6 25	5 55	11 30	6 25	5 55	11 30	6 25	5 55	11 30	6 26	5 54	11 28	6 26	5 54	11 28	6 27	5 53	11 26	6 27	5 53	11 26	6 27	5 53	11 26
21	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10
April .. 1	5 39	6 29	12 50	5 39	6 29	12 50	5 39	6 29	12 50	5 38	6 29	12 51	5 38	6 30	12 52	5 38	6 30	12 52	5 37	6 31	12 54	5 37	6 31	12 54	5 36	6 32	12 56
11	5 18	6 44	13 26	5 18	6 44	13 27	5 17	6 45	13 28	5 16	6 46	13 30	5 15	6 47	13 32	5 14	6 48	13 34	5 13	6 49	13 36	5 12	6 50	13 38	5 11	6 51	13 40
21	4 58	7 0	14 2	4 57	7 1	14 4	4 56	7 2	14 6	4 55	7 4	14 9	4 53	7 5	14 12	4 52	7 6	14 14	4 51	7 7	14 16	4 49	7 8	14 29	4 48	7 10	14 22
May .. 1	4 39	7 15	14 36	4 40	7 17	14 39	4 36	7 18	14 42	4 35	7 19	14 45	4 33	7 21	14 48	4 32	7 23	14 51	4 30	7 24	14 54	4 28	7 26	14 58	4 26	7 28	15 2
11	4 22	7 30	15 8	4 20	7 32	15 11	4 19	7 33	15 14	4 17	7 35	15 18	4 15	7 37	15 22	4 13	7 39	15 26	4 11	7 41	15 30	4 9	7 44	15 35	4 6	7 46	15 40
21	4 8	7 44	15 36	4 6	7 46	15 40	4 4	7 48	15 44	4 2	7 50	15 48	4 0	7 52	15 52	3 58	7 55	15 57	3 55	7 57	16 2	3 53	8 0	16 7	3 50	8 2	16 12
June .. 1	3 58	7 56	15 58	3 55	7 58	16 4	3 53	8 1	16 8	3 51	8 4	16 13	3 48	8 6	16 18	3 46	8 9	16 23	3 43	8 11	16 28	3 40	8 14	16 34	3 37	8 17	16 40
11	3 52	8 6	16 14	3 50	8 9	16 19	3 47	8 11	16 24	3 45	8 14	16 29	3 42	8 16	16 34	3 39	8 18	16 39	3 37	8 21	16 44	3 34	8 24	16 50	3 31	8 27	16 56
21	3 52	8 10	16 18	3 50	8 13	16 23	3 47	8 15	16 28	3 44	8 18	16 34	3 41	8 21	16 40	3 38	8 24	16 46	3 35	8 27	16 52	3 32	8 30	16 58	3 29	8 33	17 4
July .. 1	3 56	8 10	16 14	3 53	8 12	16 19	3 51	8 15	16 24	3 49	8 18	16 29	3 46	8 20	16 34	3 43	8 23	16 40	3 40	8 26	16 46	3 37	8 29	16 52	3 34	8 32	16 58
11	4 5	8 5	16 0	4 3	8 8	16 5	4 0	8 10	16 10	3 58	8 13	16 15	3 55	8 15	16 20	3 53	8 17	16 24	3 50	8 20	16 30	3 47	8 23	16 36	3 44	8 26	16 42
21	4 16	7 56	15 40	4 14	7 58	15 44	4 12	8 0	15 48	4 10	8 2	15 52	4 8	8 4	15 56	4 5	8 7	16 2	4 2	8 10	16 8	4 0	8 13	16 13	3 57	8 15	16 18
August 1	4 31	7 41	15 10	4 29	7 43	15 13	4 28	7 44	15 16	4 26	7 46	15 20	4 24	7 48	15 24	4 22	7 50	15 28	4 20	7 52	15 32	4 18	7 55	15 37	4 15	7 57	15 42
11	4 45	7 25	14 40	4 44	7 26	14 43	4 42	7 28	14 46	4 40	7 30	14 50	4 39	7 31	14 52	4 37	7 33	14 56	4 35	7 35	15 0	4 33	7 37	15 4	4 32	7 38	15 6
21	5 0	7 6	14 6	4 59	7 7	14 8	4 58	7 8	14 10	4 57	7 9	14 12	4 55	7 11	14 16	4 54	7 12	14 18	4 52	7 14	14 22	4 51	7 15	14 24	4 50	7 16	14 26
Sept. .. 1	5 17	6 43	13 26	5 15	6 45	13 29	5 14	6 46	13 32	5 13	6 47	13 34	5 12	6 48	13 36	5 11	6 49	13 38	5 10	6 50	13 40	5 10	6 50	13 40	5 9	6 50	13 41
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21	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14
Octobor 1	6 2	5 38	11 36	6 2	5 38	11 36	6 2	5 38	11 36	6 2	5 38	11 36	6 3	5 37	11 34	6 3	5 37	11 34	6 3	5 37	11 34	6 3	5 37	11 34	6 4	5 36	11 31
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21	6 34	4 56	10 22	6 35	4 55	10 20	6 36	4 54	10 18	6 37	4 53	10 16	6 38	4 52	10 14	6 39	4 52	10 13	6 40	4 51	10 11	6 41	4 50	10 9	6 42	4 49	10 7
Novem. 1	6 52	4 36	9 44	6 54	4 35	9 41	6 55	4 33	9 38	6 56	4 32	9 36	6 57	4 31	9 34	6 59	4 29	9 30	7 0	4 28	9 28	7 2	4 27	9 25	7 3	4 25	9 22
11	7 9	4 19	9 10	7 10	4 18	9 7	7 12	4 16	9 4	7 14	4 14	9 0	7 15	4 13	8 58	7 17	4 11	8 54	7 19	4 9	8 50	7 21	4 7	8 46	7 23	4 5	8 42
21	7 25	4 7	8 42	7 27	4 5	8 39	7 29	4 3	8 34	7 31	4 2	8 31	7 33	3 59	8 26	7 35	3 58	8 23	7 36	3 56	8 20	7 38	3 53	8 15	7 41	3 51	8 10
Decem. 1	7 38	4 0	8 22	7 40	3 58	8 17	7 43	3 55	8 12	7 45	3 53	8 8	7 47	3 51	8 4	7 49	3 48	7 59	7 52	3 46	7 54	7 54	3 44	7 50	7 57	3 41	7 44
11	7 50	3 56	8 6	7 52	3 54	8 2	7 55	3 51	7 56	7 57	3 48	7 51	8 0	3 46	7 46	8 3	3 45	7 40	8 6	3 40	7 34	8 8	3 37	7 29	8 11	3 35	7 24
21	7 58	3 58	8 0	8 0	3 55	7 55	8 3	3 53	7 50	8 6	3 50	7 44	8 8	3 48	7 40	8 11	3 45	7 34	8 14	3 42	7 28	8 17	3 39	7 22	8 20	3 36	7 16
31	8 1	4 5	8 4	8 3	4 3	8 0	8 6	4 0	7 54	8 9	3 57	7 49	8 11	3 55	7 44	8 14	3 52	7 38	8 17	3 49	7 32	8 20	3 46	7 26	8 22	3 44	7 22

The times of Sun-rising and Sun-setting, and the Length of the Day, at all those Towns and Villages which are not mentioned at the head of this Table, will be the same as those of that Town whose name is mentioned, and which is situated the nearest to them. The Numbers in this Table will answer for many Years.

A TABLE, SHOWING THE TIMES OF SUN-RISING AND SUN-SETTING, AND THE LENGTH OF THE DAY, AT ALL PLACES IN ENGLAND, SCOTLAND, IRELAND, AND WALES—(*Continued*).

Month and Day.	Scarbro', Whitehaven, Stockton, Applehy, N. of Isle of Man, Whithy, Keswick, Penrith, Belfast, Clogher, Sligo, Ballyshannon.			Sunderland, Shields, Newcastle, Carlisle, Annan, Dumfries, Wigtown, Kirkudbright, Carrickfergus, Antrim, Londonderry.			Alnwick, Rothbury, Jedburg, Ayr, Selkirk, Irvine.			Berwick, Haddington, Edinburgh, Linlithgow, Glasgow, Stirling, Dunbar, Leith, Greenock.			Forfar, Dundee, Perth, Comrie, Ardchattan.			Aberdeen, Inverhervie, Ura, Kincardine, Keil, Lsggan.			Peterhead, Inverness, Banff, Cromarty, Elgin, Applecross.			Dornock, Portenleck, Taim, Dunrobin, Dunclaim.			Wick, Thurso.			Orkney Islands.		
	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Dsy.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.	Sun.		Length of Day.
	Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.		Rises.	Sets.	
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
January 1	8 25	3 43	7 18	8 28	3 40	7 12	8 31	3 36	7 5	8 35	3 33	6 58	8 38	3 30	6 52	8 41	3 27	6 46	8 45	3 23	6 38	8 49	3 19	6 30	8 53	3 15	6 22	8 58	3 10	6 12
11	8 19	3 57	7 38	8 22	3 54	7 32	8 25	3 51	7 26	8 28	3 48	7 20	8 32	3 45	7 13	8 35	3 41	7 6	8 38	3 38	7 0	8 41	3 35	6 54	8 45	3 31	6 46	8 48	3 28	6 40
21	8 10	4 14	8 4	8 13	4 11	7 58	8 15	4 8	7 53	8 18	4 6	7 48	8 20	4 3	7 43	8 23	4 1	7 38	8 26	3 58	7 32	8 29	3 55	7 26	8 32	3 52	7 20	8 35	3 49	7 14
February 1	7 52	4 35	8 43	7 54	4 31	8 40	7 56	4 32	8 36	7 58	4 30	8 32	8 1	4 27	8 26	8 3	4 25	8 22	8 5	4 23	8 18	8 7	4 21	8 14	8 9	4 18	8 9	8 12	4 16	8 4
11	7 32	4 57	9 25	7 33	4 55	9 22	7 35	4 53	9 18	7 37	4 51	9 14	7 39	4 50	9 11	7 40	4 48	9 8	7 42	4 46	9 4	7 44	4 44	9 0	7 46	4 42	8 56	7 47	4 41	8 54
21	7 11	5 18	10 7	7 12	5 16	10 4	7 13	5 15	10 2	7 14	5 14	10 0	7 15	5 12	9 57	7 17	5 11	9 54	7 19	5 9	9 50	7 20	5 8	9 48	7 21	5 7	9 46	7 22	5 6	9 44
March .. 1	6 52	5 34	10 42	6 53	5 33	10 40	6 53	5 33	10 40	6 54	5 32	10 38	6 55	5 31	10 36	6 56	5 30	10 34	6 57	5 29	10 32	6 58	5 28	10 30	6 59	5 27	10 28	7 0	5 26	10 26
11	6 27	5 53	11 26	6 28	5 52	11 24	6 28	5 52	11 24	6 28	5 52	11 24	6 29	5 52	11 23	6 29	5 51	11 22	6 29	5 51	11 22	6 30	5 50	11 20	6 30	5 50	11 20	6 31	5 49	11 18
21	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10	6 2	6 12	12 10
April .. 1	5 36	6 32	12 56	5 35	6 33	12 58	5 34	6 31	13 0	5 33	6 35	13 2	5 33	6 35	13 2	5 32	6 36	13 4	5 32	6 36	13 4	5 31	6 37	13 6	5 30	6 38	13 8	5 29	6 39	13 10
11	5 10	6 52	13 42	5 9	6 53	13 44	5 8	6 54	13 46	5 7	6 55	13 48	5 6	6 56	13 50	5 5	6 57	13 52	5 4	6 58	13 54	5 3	6 59	13 56	5 2	7 0	13 58	5 1	7 1	14 0
21	4 47	7 12	14 25	4 45	7 13	14 28	4 43	7 15	14 32	4 42	7 16	14 34	4 40	7 18	14 38	4 39	7 19	14 40	4 37	7 20	14 43	4 36	7 22	14 46	4 35	7 23	14 48	4 33	7 25	14 52
May .. 1	4 25	7 29	15 4	4 23	7 31	15 8	4 20	7 33	15 13	4 18	7 36	15 18	4 16	7 37	15 21	4 15	7 39	15 24	4 13	7 41	15 28	4 11	7 43	15 32	4 8	7 45	15 37	4 6	7 48	15 42
11	4 4	7 48	15 44	4 2	7 50	15 48	4 0	7 53	15 53	3 57	7 55	15 58	3 54	7 58	16 4	3 52	8 0	16 8	3 49	8 3	16 14	3 46	8 5	16 19	3 44	8 8	16 24	3 41	8 11	16 30
21	3 47	8 5	16 17	3 45	8 7	16 22	3 43	8 10	16 27	3 40	8 12	16 32	3 37	8 15	16 38	3 34	8 18	16 44	3 31	8 22	16 51	3 27	8 25	16 58	3 23	8 29	17 6	3 19	8 33	17 14
June .. 1	3 34	8 20	16 46	3 31	8 23	16 52	3 28	8 26	16 58	3 25	8 29	17 2	3 22	8 33	17 11	3 18	8 36	17 18	3 14	8 40	17 26	3 10	8 44	17 34	3 6	8 48	17 42	3 2	8 52	17 50
11	3 28	8 30	17 2	3 24	8 34	17 10	3 20	8 37	17 17	3 17	8 41	17 24	3 13	8 45	17 32	3 9	8 49	17 40	3 5	8 53	17 48	3 0	8 58	17 58	2 56	9 2	18 6	2 52	9 6	18 14
21	3 26	8 37	17 11	3 22	8 40	17 18	3 18	8 44	17 26	3 15	8 47	17 32	3 11	8 51	17 40	3 7	8 55	17 48	3 2	8 59	17 57	2 58	9 4	18 6	2 53	9 8	18 15	2 49	9 13	18 24
July .. 1	3 31	8 35	17 4	3 28	8 38	17 10	3 24	8 41	17 17	3 21	8 45	17 24	3 17	8 49	17 32	3 13	8 53	17 40	3 9	8 57	17 48	3 5	9 1	17 56	3 0	9 4	18 4	2 56	9 10	18 14
11	3 41	8 29	16 48	3 38	8 32	16 54	3 34	8 36	17 2	3 31	8 39	17 8	3 28	8 42	17 14	3 25	8 45	17 20	3 21	8 49	17 28	3 17	8 53	17 36	3 13	8 57	17 44	3 9	9 1	17 52
21	3 54	8 18	16 24	3 52	8 20	16 28	3 49	8 23	16 34	3 46	8 26	16 40	3 44	8 28	16 44	3 41	8 31	16 50	3 38	8 34	16 56	3 34	8 38	17 4	3 30	8 42	17 12	3 26	8 46	17 20
August 1	4 12	7 59	15 48	4 10	8 2	15 52	4 8	8 4	15 56	4 5	8 7	16 2	4 3	8 9	16 6	4 1	8 11	16 10	3 58	8 14	16 16	3 56	8 16	16 20	3 53	8 19	16 26	3 50	8 22	16 32
11	4 30	7 39	15 9	4 29	7 41	15 12	4 27	7 44	15 17	4 24	7 46	15 22	4 22	7 48	15 26	4 21	7 49	15 28	4 18	7 52	15 34	4 16	7 54	15 38	4 14	7 57	15 43	4 11	7 59	15 48
21	4 48	7 18	14 30	4 47	7 19	14 32	4 45	7 20	14 35	4 44	7 22	14 38	4 43	7 23	14 40	4 41	7 25	14 44	4 40	7 26	14 46	4 38	7 28	14 50	4 36	7 30	14 54	4 34	7 32	14 58
Sept. .. 1	5 9	6 51	13 42	5 8	6 52	13 44	5 7	6 53	13 46	5 6	6 54	13 48	5 5	6 55	13 50	5 4	6 56	13 52	5 3	6 57	13 54	5 2	6 58	13 56	5 1	6 59	13 58	5 0	7 0	14 0
11	5 28	6 26	12 58	5 27	6 27	13 0	5 27	6 27	13 0	5 26	6 28	13 2	5 26	6 28	13 2	5 25	6 29	13 4	5 25	6 29	13 4	5 24	6 30	13 6	5 23	6 31	13 8	5 22	6 32	13 10
21	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14	5 46	6 0	12 14
October 1	6 4	5 36	11 32	6 4	5 36	11 32	6 4	5 36	11 32	6 5	5 35	11 30	6 5	5 35	11 30	6 6	5 34	11 28	6 6	5 34	11 28	6 6	5 34	11 28	6 6	5 34	11 28	6 7	5 33	11 26
11	6 23	5 11	10 48	6 24	5 10	10 46	6 25	5 10	10 45	6 25	5 9	10 44	6 26	5 8	10 42	6 27	5 7	10 40	6 27	5 7	10 40	6 28	5 6	10 38	6 29	5 5	10 36	6 30	5 4	10 34
21	6 43	4 47	10 4	6 44	4 46	10 2	6 45	4 45	10 0	6 46	4 44	9 58	6 48	4 43	9 55	6 49	4 41	9 52	6 50	4 40	9 50	6 51	4 39	9 48	6 52	4 38	9 46	6 53	4 37	9 44
Novem. 1	7 5	4 24	9 19	7 6	4 22	9 16	7 8	4 20	9 12	7 10	4 18	9 8	7 12	4 16	9 4	7 14	4 14	9 0	7 15	4 12	8 57	7 18	4 10	8 52	7 20	4 9	8 49	7 21	4 8	8 47
11	7 24	4 3	8 39	7 26	4 2	8 36	7 29	4 0	8 31	7 31	3 57	8 26	7 33	3 55	8 22	7 35	3 53	8 18	7 38	3 50	8 12	7 40	3 48	8 8	7 43	3 45	8 2	7 46	3 42	7 56
21	7 44	3 48	8 4	7 46	3 46	8 0	7 49	3 43	7 54	7 52	3 40	7 48	7 55	3 37	7 42	7 57	3 35	7 38	8 0	3 32	7 32	8 3	3 29	7 26	8 7	3 25	7 18	8 10	3 22	7 12
Decem. 1	8 0	3 38	7 38	8 3	3 35	7 32	8 6	3 32	7 26	8 9	3 29	7 20	8 12	3 25	7 13	8 16	3 22	7 6	8 19	3 19	7 0	8 22	3 16	6 54	8 26	3 12	6 46	8 29	3 9	6 40
11	8 14	3 32	7 18	8 17	3 29	7 12	8 20	3 25	7 5	8 24	3 22	6 58	8 27	3 19	6 52	8 30	3 16	6 46	8 34	3 12	6 38	8 38	3 8	6 30	8 43	3 3	6 20	8 47	2 59	6 12
21	8 23	3 33	7 10	8 26	3 30	7 4	8 29	3 26	6 57	8 33	3 23	6 50	8 36	3 19	6 43	8 40	3 16	6 36	8 44	3 12	6 28	8 48	3 8	6 20	8 52	3 3	6 11	8 57	2 59	6 2
31	8 25	3 41	7 16	8 28	3 38	7 10	8 31	3 34	7 3	8 35	3 31	6 56	8 38	3 28	6 50	8 41	3 25	6 44	8 45	3 21	6 36	8 49	3 17	6 28	8 54	3 12	6 18	8 58	3 8	6 10

The times of Sun-rising and Sun-setting, and the Length of the Day, at all those Towns and Villages which are not mentioned at the head of this Table, will be the same as those of that Town whose name is mentioned, and which is situated the nearest to them. The Numbers in this Table will answer for many Years.

APPEARANCE OF THE HEAVENS

ON JANUARY 1, 1850, AT 8H. P.M., AS SEEN NEAR LONDON.

EAST OF THE MERIDIAN.

N.E. by N.—The Great Bear, 35° high; the Pointers abont 32° high.
N.E.—Leo Minor, 15° high; above which are the fore-legs of the Great Bear.
N.E. by E.—Lynx, 45° high.
E.—The Crab, 20° high; Pollux, 34°; Castor, 38°; Beta Aurigæ, 62°; and Capella, 67° high.
E. by S —Procyon, 17° high.
S.E. by E.—Sirius, 6° high; Alpha Orionis, 33° high; Mars, 42°; and Beta Tauri, 44° high.
S.E.—The three stars in the belt of Orion, 27°; Gamma Orionis, 36° high; above which is the Bull.
S.E. by S.—Rigel, 24° high; Aldebaran, 50° high; above which, the legs of Perseus.
S. by E.—The Pleïades, 61° high.

ON THE MERIDIAN.

A little above the north horizon is a part of Draco; Ursa Minor, Polaris; above which, Camelopardalus; Perseus, near the zenith; Alpha Persei, 4° east of the meridian; and Beta Persei, 2° west; below these, the Fly, the hinder-part of the Ram, the head of the Whale; and Alpha Ceti, 42° high.

WEST OF THE MERIDIAN.

S.S W.—Alpha Arietis, 61° high; and Cetus, 23° high.
S.W. by S.—Hinder part of the Whale, 15° high; and Gamma Andromedæ, 15° from the zenith
S.W.—Saturn, 27° high.
S.W. by W —Gamma Pegasi, 40° high; and Beta Andromedæ, 63° high.
W.S.W.—Alpha Andromedæ, 53° high; and Alpha Pegasi, 32° high.
W.—Beta Pegasi, 42° high; Andromeda, 20° from the zenith.
W. by N —Delphinus.
N.W. by W.—Alpha Cygni, 33° high; and Alpha Lyræ, N.W. 10° high.
N.N.W.—Beta and Gamma Draconis, 18° high.

APPEARANCE OF THE HEAVENS ON FEBRUARY 1, 1850, AT 8H. P.M.

EAST OF THE MERIDIAN.

N.N.E.—The Northern Crown rising.
N.E. by N.—The tall, back, and the hinder part of the Great Bear; and near the zenith the head of the Lynx; Eta of the Great Bear, 20°; and Zeta, 26° high.
Near N.E.—Delta of the Great Bear, 34°; Alpha, 44°; Gamma, 34°; and Beta, 41° high.
E.N E.—Leo Minor, 30°; and Lynx, 60° high.
E.—Regulus, 19° high; above which, Leo; and, higher up, the legs of the Lynx.
E.S.E.—Hydra, 20°; Crab, 45°; Gemini, 55°; Pollux, 53°; and Castor, 57° high.
S.E.—Procyon, 35° high.
S.S E.—Sirius, 20° high.
S. by E.—Alpha Orionis, 44° high.

ON OR NEAR THE MERIDIAN.

Starting from the N., at a little west of the meridian Beta and Gamma Draconis, 15° high; above which, the Little Bear, Polaris, Camelopardalus, Auriga in zenith; south of the zenith, Taurus; lower, and a little west, Orion; still lower, the Hare, at the height of 20°; near the meridian, Rigel, 30°; three stars in Orion, 31°; Gamma Orionis, 44°; Aldebaran, a little west of meridian, 54°, Mars, a little east of the meridian, 64° high; Beta Tauri, near Mars, 66° high: Capella is near the zenith.

WEST OF THE MERIDIAN.

Near S.W. by S.—Alpha Ceti, 35°; and the Pleïades, 58° high.
S.W.—Cetus, 15° high; above which, the Ram; higher still, the Fly; and Perseus near the zenith.
W.S.W.—Saturn, 9° high.
W. by S.—Gamma Pegasi, 22°; and Gamma Andromedæ, 58° high.
W.—Alpha Andromedæ, 31°; and Beta Andromedæ, 46° high.
Near W. by N.—Alpha Pegasi, 11° high.
Near W.N.W.—Beta Pegasi, 23° high.
Near N.N.W.—Alpha Cassiopeiæ, 51°, and Beta Cassiopeiæ, 48° high.
N.W. by N.—Alpha Cygni, 16° high; and Alpha Lyræ is near the horizon in the N.N.W.

APPEARANCE OF THE HEAVENS ON MARCH 1, 1850, AT 9H. P.M.

EAST OF THE MERIDIAN.

N. by E.—Alpha Lyræ rising.
N.N.E.—Gamma Draconis, 15°; Beta Draconis, 18°; and the Little Bear, 45° high.
Near N.E.—The Northern Crown rising.
N.E. by E.—Boötes, 17° high; above which, parts of the Great Bear, Eta, Zeta, Epsilon, Delta, and Gamma of which are 36°, 42°, 46°, 52°, and 54° high, respectively; higher still, Beta, 61° high; and Alpha, N. of Beta, 61° high.
Near E.N.E.—Arcturus, 11°; in the east the Virgin rising; above which Coma Berenices; and higher still, Leo Minor.
Near E.S.E.—Beta Leonis, 32° high; Jupiter, 16° high.
Near S.E.—Regulus, 41°; and Gamma Leonis, 48° high.
S.S.E.—Alpha Hydræ, 27° high.

ON THE MERIDIAN.

The body of the Unicorn, 35° high; above which is the Little Dog, a little W. of meridian is Procyon, 44° high; above which Gemini, with Pollux near the meridian, 67° high, and Castor a little more West, 70° high; between this point and the zenith is the Lynx; N. of the zenith is the head of the Great Bear; and near the N. horizon is the body of the Swan.

WEST OF THE MERIDIAN.

Near S.S.W.—Sirius, 20° high; a little more W. Beta Canis Majoris, 18°.
S.W. nearly.—Rigel, 21°; three stars in Orion, 30°; Gamma Orionis, 35°; Alpha Orionis, 39° high; and Mars, 57° high.
W.S.W.—Aldebaran, 36°; and Beta Aurigæ, 69° high.
W. by S.—Alpha Ceti, 13°; the Pleïades, 36°; and Capella, 64° high.
W. by N.—Alpha Arietis, 19°, and Beta Persei, 42° high.
N.W. by N.—Alpha Andromedæ, 6°; Beta Andromedæ, 19°; Gamma Andromedæ, 32°; Gamma Pegasi, 48°; and Beta Cassiopeiæ, 30° high.

APPEARANCE OF THE HEAVENS ON APRIL 1, 1850, AT 9H. P.M.

EAST OF THE MERIDIAN.

N. by E.—Alpha Cygni, 5°.
N.E. by N.—The Harp rising; Alpha Lyræ, 8° high; above which, a little to the left, is Gamma Draconis, 24°, and Beta Draconis, 26°; higher up, the Little Bear.
N.E.—Alpha Draconis, 55° high.
N.E. by E.—Zeta, Epsilon, Delta, Gamma, and Beta of the Great Bear, 57°, 61°, 69°, 71°, and 79° high, respectively.
Near N.E. by E.—The Northern Crown, 25° high.
E.—Alpha Serpentis, 5°; and Arcturus, 30° high.
S.E. by E.—Spica Virginis, 11°.
S.E.—Beta Leonis, 47° high.
S.E. by S.—Jupiter, 52° high.

ON AND NEAR THE MERIDIAN.

Alpha Hydræ, 31°; Regnlus, 41°; higher up, the head of the Lion, the fore-legs and body of the Great Bear, with the Pointers, abont 10° east of the meridian; and below Polaris is Cepheus.

WEST OF THE MERIDIAN.

S.W.—Sirius, 11°; Procyon, 38° high; above which, the Crab.
Near W.S.W.—Rigel, 6°; Orion's belt, 15°; a little west, Gamma Orionis, 19°; Alpha Orionis, 25°; Gamma Geminorum, 38°; Castor, 58°; a little west, Pollux, 56°; higher up, the body of the Lynx, and the head of the Great Bear: Mars, 47° high.
W.—Aldebaran, 19°; Beta Tauri, 36°.
W. by N.—The Pleïades, 18°; Beta Aurigæ, 53°; and Alpha Arietis, setting.
W.N.W.—Capella, 46° high.
N.W. by W.—Beta Persei, 25° high; a little to the north, Alpha Persei, 33° high.
Near N.W.—Beta Andromedæ, 7°; Gamma Andromedæ, 18°; and N.N.W., 25° high, Cassiopeiæ.

APPEARANCE OF THE HEAVENS ON MAY 1, 1850, AT 10H. P.M.

EAST OF THE MERIDIAN.

N. by E.—Beta Cassiopeiæ, 20° high.
N.E.—Alpha Cygni, 20° high.
N.E. by E.—Gamma Draconis, 43° high; and Beta Draconis, 47° high.
E.N.E.—Alpha Lyræ, 30° high.
E. by S.—Alpha Ophinchi, 20°; and Alpha Herculis, 25° high.
E.S.E.—The Northern Crown, 40° high.
S.E. by E.—Alpha Serpentis, 34° high.
S.E. by S.—Beta Libræ, 22°; and Arcturus, 54° high.
S. by E.—Spica Virginis, 28° high.

ON AND NEAR THE MERIDIAN.

Cassiopeia; above which the middle star in the tail of the Bear, with Zeta 5° to the E., Delta 2° to the W., and Alpha, Beta, and Gamma of the Great Bear within 13° W. of the Meridian, and all near the zenith.

WEST OF THE MERIDIAN.

S.S.W.—Beta Leonis, 43°.
Near S.W.—Alpha Hydræ, 17°; Regulus, 40°; Gamma Leonis, 49° high; and Jupiter, 42° high.
W.—Procyon, 70° high; Mars, 29° high.
W. by N.—Gamma Geminorum, 12°; Pollux, 32°; and Castor, 32° high.
N.W. by W.—Beta Tauri, 10°.
N.W.—Capella, 23°; Beta Aurigæ, 27°; above these, and near the zenith, the Great Bear.
Near N.N.W.—Beta Persei, 6°; and Alpha Persei, 16° high.

APPEARANCE OF THE HEAVENS ON JUNE 1, 1850, AT 10H. P.M.

EAST OF THE MERIDIAN.

N.N.E.—Beta Cassiopeiæ, 24° high.
N.E. by E.—Alpha Cygni, 35° high.
E.N.E.—Gamma Draconis, 60°; and Beta Draconis, 64° high.
E. by N.—Alpha Lyræ, 48°.
E. by S.—Alpha Aquilæ 15° high.
Near S.E.—Alpha Ophiuchi. 40°; and Alpha Herculis, 44° high.
S.S.E.—Northern Crown, 65° high.

ON OR NEAR THE MERIDIAN.

Perseus near the north horizon, Alpha Draconis a little north of zenith, Arcturus 58° high, and 10° W. of the meridian; and Alpha Libræ near the meridian, at the height of 24°.

WEST OF THE MERIDIAN.

S.S.W.—Spica Virginis, 25° high.
S W. by W.—Beta Leonis, 39°; and Jupiter, 28° high.
W. by S.—Regulus, 23° high; and Gamma Leonis, 30° high.
W. by N.—Pollux, 12° high; Castor, 13°; and Mars, 18° high.
N.W. by N.—Beta Aurigæ, 14° high; Venus setting.
N.N.W.—Capella, 12° high; above which is the Great Bear.

APPEARANCE OF THE HEAVENS ON JULY 1, 1850, AT 10H. P.M.

EAST OF THE MERIDIAN.

N. by E.—Alpha Persei, 12° high.
N.E. by N.—Gamma Andromedæ, 10°; and Beta Cassiopeiæ, 33° high.
N.E. by E —Alpha Andromedæ, 10° high.
E.N E.—Beta Pegasi, 19° high.
E. by N.—Alpha Pegasi, 9°; and Alpha Cygni, 51° high.
E. and near the Zenith.—Gamma and Beta Draconis.
S.E. by E.—Alpha Aquilæ, 34°; and Alpha Lyræ, 69° high.
S. by E.—Alpha Ophiuchi, 41° high; and Alpha Herculis, 49° high.

ON OR NEAR THE MERIDIAN.

Capella near the horizon, and due N.; and Antares 4° W. of the meridian, and 12° above the S. horizon.

WEST OF THE MERIDIAN.

S. by W.—Beta Scorpii, 18°.
S.W. by S.—Alpha Libræ, 18°; Beta Libræ, 26°; and Alpha Serpentis, 45° high; the Northern Crown, 65° high.
S.W. by W.—Spica Virginis, 14°; and Arctnrus, 46° high.
W.—Beta Leonis, 22° high; Jupiter, 10° high.
W. by N.—Regulns and Mars nearly setting.
N.W.—Great Bear, 48° high; and Castor is setting near W. by N.
N.W. by N.—Venus setting.

APPEARANCE OF THE HEAVENS ON AUGUST 1, 1850, AT 10H. P.M.

EAST OF THE MERIDIAN.

Near N. by E.—Beta Aurigæ, 7°; and Capella, 9° high.
Near N.E. by N.—Alpha Persei, 20°; and Beta Persei, 13° high.
Near N E.—Gamma Andromedæ, 21°; and Beta Cassiopeiæ, 45° high.
N.E. by E.—Alpha Arietis rising.
E.N.E —Beta Andromedæ, 22° high.
E. by N.—Alpha Andromedæ, 26° high; Saturn will rise within a few minutes.
E.—Gamma Pegasi, 16°; Beta Pegasi, 36°; and Alpha Cygni, 70° high.
E. by S.—Alpha Pegasi, 26° high.
S.S.E.—Alpha Aquilæ, 45° high.

ON OR NEAR THE MERIDIAN.

The Lynx, near the north horizon; Draco, near the zenith; Lyra south of the zenith; Alpha Lyræ being on the meridian: near the zenith, and 5° W. of the meridian, is Gamma Draconis; and 9° W. is Beta Draconis.

WEST OF THE MERIDIAN.

S.S.W.—Alpha Ophiuchi, 39°; Alpha Herculis, 40° high.
S.W. by S.—Antares, 7°; a little to the right is Beta Scorpii, 10° high.
S.W. by W.—Alpha Libræ, 6°; and Beta Libræ, 16° high.
W. by S.—Arcturus, 32° high; the Northern Crown, 43° high.
N W.—The stars in the tail of the Great Bear, 40° high.
N.W. by N.—The Pointers, 35° high.

APPEARANCE OF THE HEAVENS ON SEPTEMBER 1, 1850, AT 9H. P.M.

EAST OF THE MERIDIAN.

N.N.E.—Beta Aurigæ, 9° high; to the right, Capella, 12° high.
N.E.—Alpha Persei, 26° high.
E.N E.—Alpha Arietis, 14°; Beta Andromedæ, 32° high.
E. by N.—Beta Persei, 20°; Beta Cassiopeiæ, 53° high.
E.—Saturn, 5° high
E. by S.—Gamma Pegasi, 26°; Beta Pegasi, 36°; and Alpha Pegasi, 37° high.

ON OR NEAR THE MERIDIAN.

Body of the Lynx, Polaris, a little S. of the zenith; and 10° E. of the meridian, Alpha Cygni; 13° W. of the meridian, Alpha Lyræ; Alpha Aquilæ, on the meridian, 47° above the southern horizon.

WEST OF THE MERIDIAN.

S.W.—Alpha Herculis, 42°; Alpha Ophiuchi, 43°; and Alpha Lyræ, 71° high.
W.S.W.—Beta Libræ, 7°; and Alpha Serpentis, 23° high.
W.—The Northern Crown, 42°; Beta Draconis, 72°; and Gamma Draconis, 74° high.
W by N.—Arcturus, 20° high.
N.W. by N.—The stars in the tail of the Great Bear, 33° high.
N.N.W.—The Pointers, 30° high.

APPEARANCE OF THE HEAVENS ON OCTOBER 1, 1850, AT 9H. P.M.

EAST OF THE MERIDIAN.

N.E. by N.—Castor rising.
Near N.E.—Capella, 26°; and Beta Aurigæ, 20° high.
Between E. by N. and E.N E.—Aldebaran, 7°; Beta Persei, 38°; and Alpha Cassiopeiæ, 64° high.
Near E. by N.—The Pleiades, 18° high; and Gamma Andromedæ, 46° high.
E. by S.—Alpha Ceti, 10°; Alpha Arietis, 33°; Beta Andromedæ, 51° high.
E.S.E.—Alpha Andromedæ, 55° high
S.E. by E.—Saturn, 25° high; and Gamma Pegasi, 43° high } These four stars form a square,
S.E. by S —Beta Pegasi, 62° high. } called the square
S.S.E.—Alpha Pegasi, 51° high. } of Pegasus.

ON OR NEAR THE MERIDIAN.

The head and fore part of the Great Bear, on the north meridian. A little west of the meridian are the Pointers, and more west are Gamma and Delta of the Great Bear; and still more west, the three stars in the tail. Above Polaris is Cepheus; east of which is Cassiopeia; a little south of the zenith, and 15° west of the meridian, is the body of the Swan, Alpha Cygni being about 10° from the meridian: Aquarius is situated a little south of the Equator.

WEST OF THE MERIDIAN.

S.S.W.—The four stars forming the rhomhoidal figure, called Delphinus, 50° high.
S.W. by S.—Alpha Aquilæ, 42° high.
W. by N.—Alpha Lyræ, 56°; and Alpha Cygni, 77° high.
W.N.W.—The Northern Crown, 15° high; Beta and Gamma Draconis, 53° high.
N.W. by W.—Arcturus, setting.
N.N.W.—The tail of the Bear, 20° high.

APPEARANCE OF THE HEAVENS ON NOVEMBER 1, 1850, AT 8H. P.M.

EAST OF THE MERIDIAN.

N. by E.—The head of the Great Bear, 20° high.
N.E. by N.—Castor, 5° high.
N.E. by E.—Beta Aurigæ, 25°: Capella, 32° high.
E.N.E.—Alpha Persei, 47° high.
E.—Aldebaran, 15°; Pleiades, 29°; Gamma Andromedæ, 58° high.
E S.E.—Alpha Ceti, 34°; Alpha Arietis, 45°; Beta Andromedæ, 61° high.
S.E.—Saturn, 34°; Alpha Andromedæ 65°, and Gamma Pegasi 50° high, being the eastern pair of stars forming the square of Pegasus.

ON OR NEAR THE MERIDIAN.

The Pointers nearly on the meridian below Polaris, with Gamma and Delta of the Great Bear about 10° west of the meridian; Cepheus is situated between Polaris and the zenith. Within a few degrees east of the meridian is Beta Pegasi, 64° high; both Alpha Pegasi and Fomalhaut are near the meridian—the former is 52°, and the latter is 8° high.

WEST OF THE MERIDIAN.

S.W.—Delphinus, 45° high.
S.W. by W.—Alpha Aquilæ, 33° high.
W.—Alpha Cygni, 67°; Alpha Ophinchi, 16° high.
W. by N.—Alpha Lyræ, 41°; and Alpha Herculis, 14° high.
N.W. by N.—The Northern Crown, 14°; and Gamma and Beta Draconis, 14° high.
N.N.W.—The tail of the Great Bear, 20° high.

APPEARANCE OF THE HEAVENS ON DECEMBER 1, 1850, AT 8H. P.M.

EAST OF THE MERIDIAN.

N by E.—Gamma and Delta of the Great Bear, 16° and 19° high respectively.
N N.E.—Beta and Alpha of the Great Bear, 20° and 25° high respectively.
N E.—The Lynx, 25°; and higher up, the legs of Camelopardalus.
N E. by E —Pollux, 12°, and Castor, 17° high.
E.N.E.—Beta Aurigæ, 40°; Capella, 46°; and higher up, Perseus.
E.—Alpha Orionis, 13° high; and Medusa's Head, 62° high.
E. by S —The three Stars in a straight line, and at equal distances from each other, forming the belt of Orion, 10° high; Aldebaran, 32° high.
E S.E.—The Pleiades, 46° high; Gamma Andromedæ, 73° high.
S.E —Alpha Ceti, 37°; and Alpha Arietis, 57° high.

ON OR NEAR THE MERIDIAN.

Under the Pole Star is the tail of the Great Bear; above Polaris is Cassiopeia: a little south of the zenith is Andromeda, Beta Andromedæ being almost 5° east of the meridian. Saturn is near the meridian, being 5° east of it, at the altitude of 42°; and near the south horizon is the tail of Cetus.

WEST OF THE MERIDIAN.

S. by W.—Gamma Pegasi, 52°; and Alpha Andromedæ, 65° high.
S.W. by S.—Alpha Pegasi, 49° high.
S.W.—Beta Pegasi, 60° high.
W. by S.—Delphinus, 30° high; and near this point, at 17° high, is Alpha Aquilæ.
W. by N.—Alpha Cygni 51° high.
N.W. by W.—Alpha Lyræ, 30° high.
N.W.—Beta Draconis, 31° high; Gamma Draconis, 33° high.
N.W. by N.—The Northern Crown, setting.

The names and relative situations of the principal constellations and stars are given in the preceding description of the heavens at a convenient time on the first day of every month, and very great facilities are thus given to the young astronomer to learn them.

The altitude of the constellation, star, or planet is to be understood as measured in angular measure, upon a vertical circle, above that point in the horizon which an arc of a circle drawn from the zenith (the point immediately overhead), and passing through or near the objects named, touches the horizon. The measure of this arc, or the angular distance from the zenith to the horizon is 90°; therefore, as all the altitudes are expressed in angular measure, that is, in degrees, whose symbol is °, it will be readily seen that if an object be mentioned as being 10° high, it is above the horizon by one-ninth part of the whole distance from the horizon to the zenith; if 30°, it would be one-third part; if 45°, it would be situated midway between the horizon and zenith.

For any day in the month the same description will apply for the stars, and for the planets nearly; only it will correspond to a time earlier each day by 3 minutes and 56 seconds (4 minutes nearly). Thus, in every month, the description will be the same as on the 1st day of that month.

	Earlier than the Time on the 1st H. M. S.		Earlier than the Time on the 1st H. M. S.
On the 2nd day, at	0 3 56	On the 17th day, at.. ..	1 2 56
3rd	0 7 52	18th	1 6 52
4th	0 11 48	19th	1 10 48
5th	0 15 44	20th	1 14 44
6th	0 19 40	21st	1 18 40
7th	0 23 36	22nd	1 22 36
8th	0 27 32	23rd	1 26 32
9th	0 31 28	24th	1 30 28
10th	0 35 24	25th	1 34 24
11th	0 39 20	26th	1 38 20
12th	0 43 16	27th	1 42 16
13th	0 47 12	28th	1 46 12
14th	0 51 8	29th	1 50 8
15th	0 55 4	30th	1 54 4
16th	0 59 0	31st	1 55 0

Thus, on January 16th, at 7h. 1m. P.M., the stars will occupy the same position in the heavens as they will do on January 1st, at 8h. P.M.

The description of the heavens, so far as the stars and constellations are detailed, will be the same nearly, at the same times, on the same days for many years.

TIMES OF THE POLE STAR (POLARIS) BEING ON THE MERIDIAN, OR DUE NORTH, DURING THE YEAR 1850.

The Pole Star (that which is usually so called) is situated at the angular distance of 1°½ from the Pole, and describes a circle at this distance around this point or pole. If we suppose a star there placed, it would appear stationary. The Pole Star not being so placed, it is due north only at such times as in its revolution it is on the meridian, which circumstance takes place twice every day—once when the star is above the pole, and once when it is below the pole. The following are the times, on the 1st day of every month during the year 1850, that the Pole Star is so situated:—

	H. M. S.			H. M. S.	
Jan. 1 at	6 23 12	A.M.	below the Pole, and at	6 21 13	P.M. above the Pole.
Feb. 1 „	4 20 53	„	„	4 18 55	„ „
March 1 „	2 30 29	„	„	2 28 31	„ „
April 1 „	0 28 27	„	„	0 26 29	„ „
May 1 „	10 28 36	„	above the Pole, and at	10 26 38	„ below the Pole.
June 1 „	8 27 1	„	„	8 25 3	„ „
July 1 „	6 29 27	„	„	6 27 29	„ „
Aug. 1 „	4 27 58	„	„	4 26 0	„ „
Sept. 1 „	2 26 25	„	„	2 24 27	„ „
Oct. 1 „	0 28 38	„	„	0 26 40	„ „
Nov. 1 „	10 24 46	„	below the Pole, and at	10 22 48	„ above the Pole.
Dec. 1 „	8 26 35	„	„	8 24 37	„ „

From these times those of the meridian passage of the star can be easily calculated for any other day in every month.

DISCOVERY OF ANOTHER SMALL PLANET.

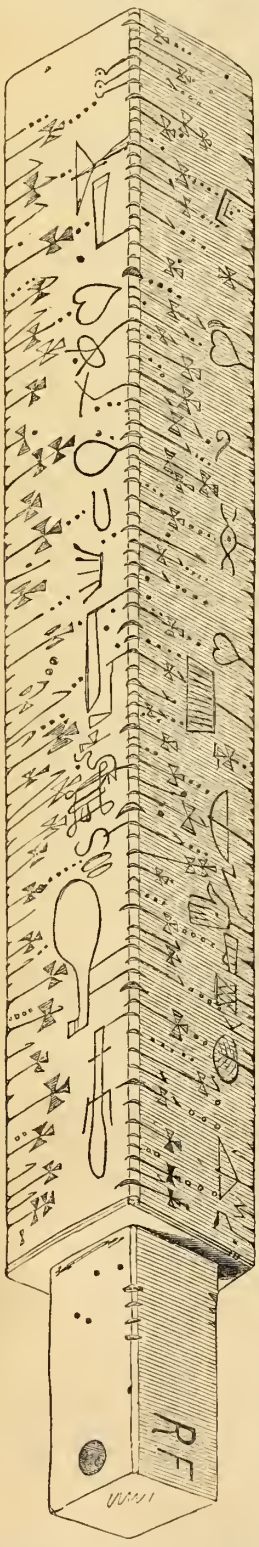
On April 12, 1849, Signor de Gasparis, of the Observatory of Naples, whilst comparing Steinheil's Star Map for hour XII with the heavens, discovered a Planet: its appearance at this time was that of a small star of the 9th or 10th magnitude.

M. de Gasparis referred the naming of his new Planet to M. Capocci, who has called it *Hygeia*. (See the monthly notices of the Royal Astronomical Society, Nos. 7 and 8 of the 9th volume, for Ephemerides and Elements.)

CLOG ALMANACK

PRESERVED IN THE CHETHAM LIBRARY, MANCHESTER.

Whether the "Clog," of which we here give an Engraving, was originally left to the Library by the founder, or was presented subsequently by some other person, we have not been able to ascertain. Though unquestionably formed after an ancient Runic type, it is certainly not of great antiquity; and probably not of an earlier date than the time of Humphrey Chetham, who lived in the reigns of James I. and Charles I., and founded the library which bears his name, in 1665. About forty years ago, when a boy belonging to the school usually acted as guide to visitors to the Library, he never failed to draw their attention to the "Clog," as one of the principal curiosities. "This," exclaimed the juvenile *Cicerone*, "is a Clog Almanack, such as were in use in this country before the invention of printing."



Almanacks, or more properly Calendars, of this kind, were used by the Danes, Norwegians, and other people of northern race, at a very early period; and a full account of their various kinds and different names—Rim-stocks, Rune-stocks, Primstaves, Scipiones Runici, and Baculi Annales—are to be found in the "Fasti Danici" of Olaus Wormius, printed at Copenhagen, 1643. One of those Calendars, in the form of a walking-stick, was exhibited by Sampson Hodgkinson, Esq., at the meeting of the Archæological Institute, at Lincoln, in 1848; and an engraving of it is given in the Illustrated London Almanack for 1849.

Verstegan, in his "Restitution of Decayed Intelligence in Antiquities," 1605, thus speaks of those calendars in his third chapter, "Of the Ancient Manner of Living of our Saxon Ancestors:"—"They used to engrave upon certaine squared sticks, about a foot in length, or shorter or longer as they pleased, the courses of the moones of the whole yeare, whereby they could always certainly tell when the new moones, ful moones, and changes should happen, as also their festial days; and such a carved stick they called an *Al-mon-aght*—that is to say, Al-moon-heed: to wit, the regard or observation of all the moones; and herehence is deryved the name of Almanack."

That we may not be supposed to concur in this derivation of Almanack, we merely remark, that "our Saxon ancestors" had no such name for their calendars as "*Al-mon-aght*;" and that Verstegan's etymology may, with better reason, be termed "All-moon-shine."

Dr. Robert Plot, in his "Natural History of Staffordshire," printed at Oxford, 1686, gives a full account of Clog Almanacks of the kind represented in our Engraving; and speaks of them as being still in use "among the meaner sort of people" in that county. He, however, says that it is "a sort of antiquity so little known, that it hath scarce been heard of in the southern parts of England, and understood now but by few of the gentry in the northern." With respect to the term "*Clog*," he thus runs his head against it, while pretending that it was something difficult to be found:—"As to the divers names of them, they are here called *Cloggs*, for what reason I could not learn, nor, indeed, imagine, unless from the English *logg* (a term we usually give to any piece of wood), or from the likeness of some of the greater sorts of them to the cloggs wherewith we usually restrain the wild, extravagant, mischievous motions of some of our dogs." In Staffordshire, in his time, some few were of brass; but most of wood, chiefly box: others were of fir and of oak, though not so frequent. Those of larger size, such as are represented in our Engraving, were commonly hung at the end of the mantel-tree, by the chimney-nook; others of smaller size were carried in the pocket.

Each of the four faces contained a period of three months, commencing with the 1st of January. The days were represented by the notches on the edges, every seventh notch being somewhat wider than the others; and the first day of each month was distinguished by a longer stroke. In those clogs there was no indication of the Dominical Letter. The Golden Number, when under five, was represented by so many points. The number five was signified by a line with an angular crook at the top; and the numbers between five and ten, by the addition of points or dots. The sign of ten was a cross; and the intermediate numbers to fourteen were signified by the addition of dots. Fifteen was represented by a cross with a crook at the top; the intermediate numbers to eighteen being represented by the addition of dots. Nineteen, the highest number in the cycle, was represented by a double cross.

The principal festivals were symbolically represented. For instance—the Epiphany, 6th January, by a star; Valentine's Day, 14th February, a true-lovers' knot; the Purification, Annunciation, Assumption, and other festivals of the Virgin, by a Heart; St. David, 1st March, a Harp; St. Barnabas, 11th June, a Rake—Haymaking; St. Peter, 29th June, Keys; St. Lawrence, 10th August, a Gridiron; St. Crispin, 25th October, a pair of Shoes; St. Katherine, 25th November, a Wheel.

Our Engaving is from a drawing by Mr. Travis, of the firm of Travis and Mangnall, architects, Manchester.

WHITSUN ALE JUG.

This representation of a Whitsun Ale Jug is taken from an excellent specimen in the interesting Museum collected by T. Crofton Croker, Esq. The jug is of white earthenware, and the word Whit, and the date 1649, and the characteristic flourish underneath it, are painted blue.

Whitsun Ales were festivals formerly common at Whitsuntide, in which ale formed the predominant liquor, and hence arose the metonymy; although there has been a vast amount of pains employed to trace the name to other sources. As the money requisite for the feasts was collected by the churchwardens of the parish, Whitsun Ales have also been called Church Ales. They were kept on Sundays, notwithstanding their low and profane revelry; and entries often occur in church books of disbursements in these unholy pastimes, with which, however, are oddly mixed up charges for repairs of the church, maintaining of orphans, &c.

WHITSUN ALE JUG.

Mr. Douce has left us the following details of the Whitsun Ale:—"Two persons are chosen, previously to the meeting, to be lord and lady of the ale, who dress as suitably as they can to the characters they assume. A large empty barn, or some such building, is provided for the lord's hall, and fitted up with seats to accommodate the company. Here they assemble to dance and regale in the best manner their circumstances and the place will afford; and each young fellow treats his girl with a ribbon or favour. The lord and lady honour the hall with their presence, attended by the steward, sword-bearer, purse-bearer, and mace-bearer, with their several badges or ensigns of office. They have likewise a train-bearer or page, and a fool or jester, dress in a party-coloured jacket, whose ribaldry and gesticulation contribute not a little to the entertainment of some part of the company. The lord's music, consisting of a pipe and tabor, is employed to conduct the dance. Some people think this custom is a commemoration of the ancient *Drink-lean*, a day of festivity formerly observed by the tenants and vassals of the lord of the fee within his manor; the memory of which, on account of the jollity of those meetings, the people have thus preserved ever since. The glossaries inform us that this Drink-lean was a contribution of tenants towards a potation, or ale, provided to entertain the lord or his steward."

TOKENS OF THUNDER.

The following curious notices of the tokens of thunder in each month of the year, are from an illuminated almanack of very early date:—

"In the monethe Januarie if ther he thundir it bitokeneth grete wyndis, haboundaunce of frnytis, and hateil to come in that yeer.

"In the monethe of Februarie, if ther he thundir it bitokeneth deeth of many men, and most of riche men by soris.

"In the monethe of Marcius, if thundir sowne, it bitokeneth grete wyndis, plenté of frnytis and strues in the peple.

"In Aprilis thundir if it lowrie it shewith myry yeeryng and fructuous, but it bitokeneth deth of wickid men.

"In Mayus thundir if it come it bitoketh nedre of fruytis and hungir in that yeer.

"In Juyn if it thundir it bitokeneth that wodis shul be....of....of wyndis and ther shal he grete weondres of houns and of wolves.

"In the monethe of Juli if thundir in that yeer shal be good corn yeeryng but the hirthe of beestis shal peresche.

"August thundir it bitokeneth prosperité in the commune and mané man shul be suh....

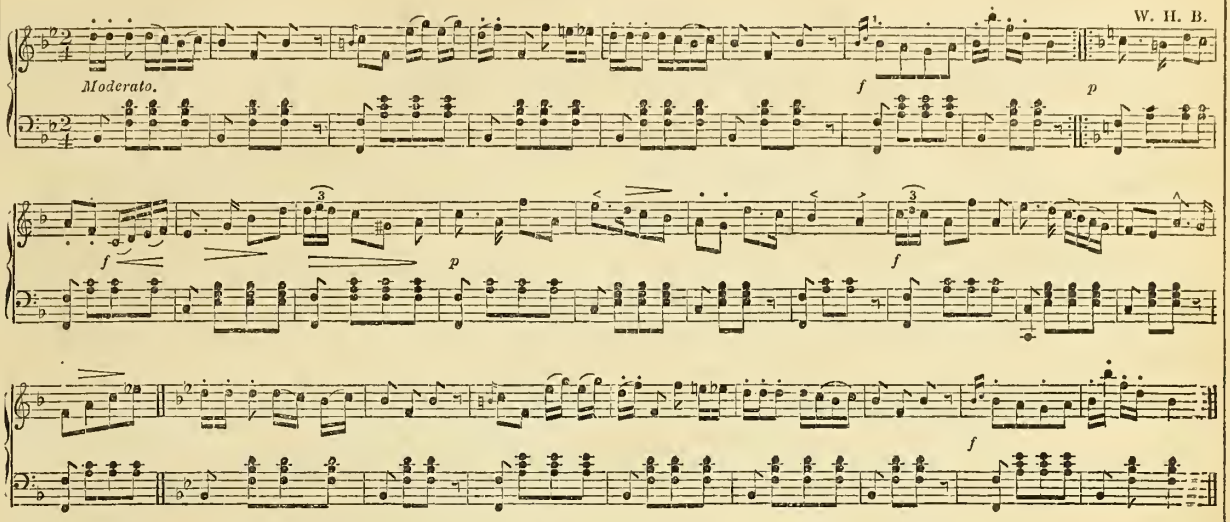
"In Septemher if it thundre it bitokeneth aboundance of fruytis.

"In October if it thundir it bitokeneth a right greet wynd and geod harvest and scarsnes of fruytis.

"In the monethe of November if it thundir it bitokeneth ahoundaunce of fruytis and myrthe among folk.

"In Decemher if thundir it bitokeneth aboundaunce of cornes and pees and accord in the peple."

THE CHRISTMAS POLKA.

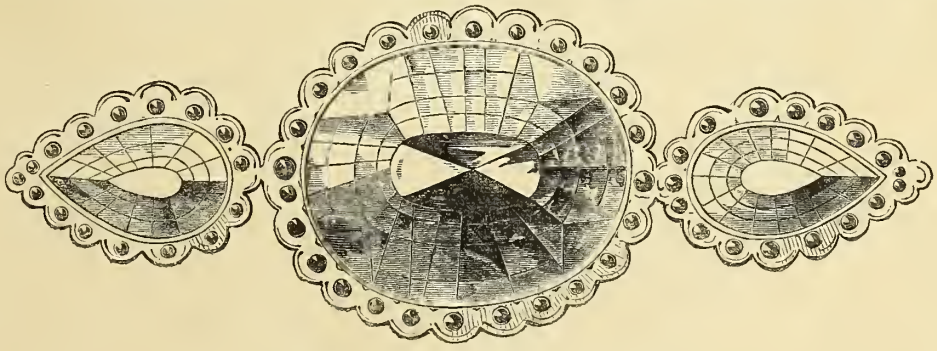


THE CELEBRATED DIAMOND, KOH-I-NOOR,
OR MOUNTAIN OF LIGHT.

This famous diamond, which was formerly in the treasury of the Maharajah Dhuleep Singh, in the Punjaub, has been forfeited by his treachery to the British; and will, it is said, be brought to England in attestation of the success of our arms in India; which has been suggested that the mischievous superstition attached to the possession of this unique gem might be utterly crushed by this retributive consignment.

We have taken some pains to obtain a Sketch of the *Kooh-i-noor*, or "Mountain of Light," and of Runjeet's ruby; both from drawings copied from originals, by Juan Ram, to whom Runjeet Singh sent them for the purpose, at the request of Lord William Bentinck.

It is generally believed that this diamond belonged to the Pandus; but Tavernier says that it was dug ont of the mine of Koloor, which is about four days' journey north-west from Masulipatam, in the Nizam's territories, on the banks of the Godavuree; and that it was presented to Shah Jehan by Meer Jumla, who was at first the Commander-in-Chief of the King of Golkonda's army, and afterwards of that of Aurungzeb. The mine of Koloor was discovered not more than a hundred years before the time of Shah Jehan; when a Zumeendar found a



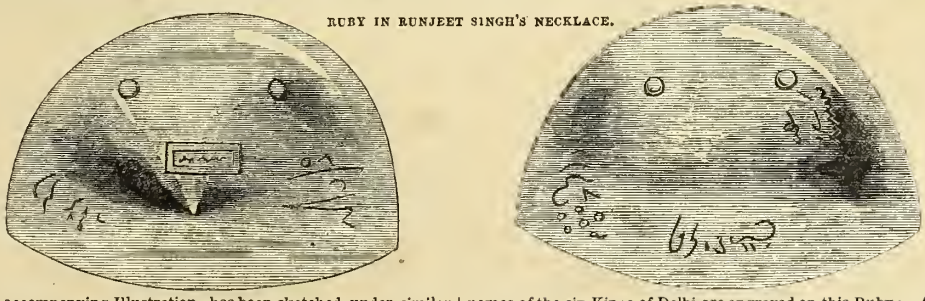
RUNJEET SINGH'S DIAMOND—"THE MOUNTAIN OF LIGHT."

diamond as he was preparing the ground for sowing melons, and this led to the discovery. The Koh-i-Noor is 319 ruttees in weight, and its value was estimated, in the time of Shah Jehan, at 78,15,525 rupees Shah Jehan applied it to adorn the famous Peacock Throne, which was taken by Nadir Shah to Persia, whence the diamond was brought back to Affghanistan by Ahmedshah Dooranee. It remained in the possession of his successors until Maharajah Runjeet Singh obliged Shah Shoojah to deliver it to him.

It is said that this diamond was taken from India by Nadir, the King of Persia, on the same date (29th of March) as that on which, during the past year (1849), it was retaken from the Sikhs by the rulers of India. The fact is, that it belonged originally to the rulers of India; and now it may be said to have come back again, after such a long time, to the hands of its rightful owners.

Runjeet Singh was accustomed to wear this diamond on his right arm, set, as we have engraved it, in gold, surrounded with small rubies. It has been valued at 25 crore of rupees, or 25 million pounds sterling. Tavernier, who saw it in the possession of the Great Mogul, states its weight to be 279 9-10th carats; before cutting, it weighed 900 carats. Its twin jewel is numbered among the crown jewels of Russia.

RUBY IN RUNJEET SINGH'S NECKLACE.

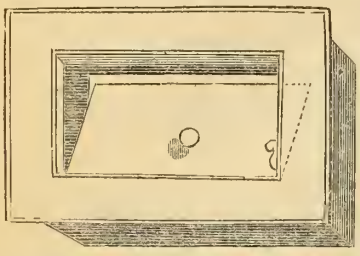


The Ruby, in the accompanying Illustration, has been sketched under similar circumstances. In the Illustration both sides are shown; the gem is worn in Runjeet's necklace. It belonged to Pandoor Rajah, was taken from him by Timour, and subsequently from Timour's descendants by Ahmeed Shah. The names of the six Kings of Delhi are engraved on this Ruby:—Alumzeer II., Shah Karam II., Jehangire, Ackbar, Feroze Shah, and Ahmed Shah. Runjeet valued it at 12½ crore of rupees, or twelve millions five hundred thousand pounds sterling.

DOMESTIC INVENTIONS—SANITARY REGULATIONS, &c.

DR. ARNOTT'S VENTILATING CHIMNEY-VALVE.

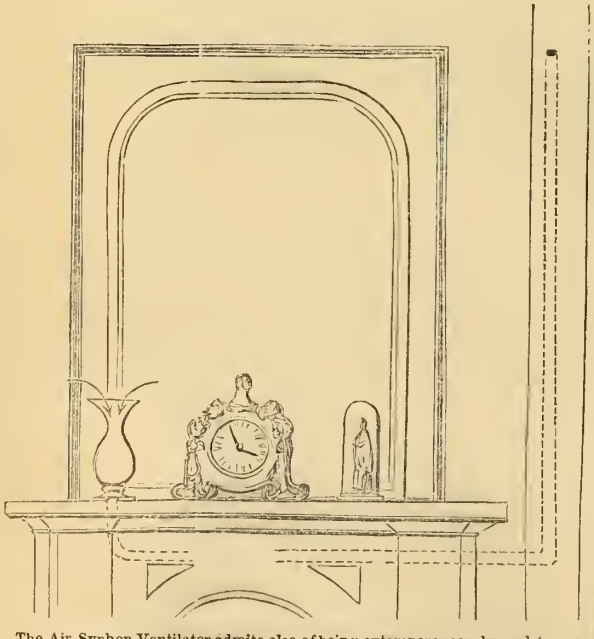
DR. ARNOTT has suggested, as some relief for an ill-ventilated room, to take a brick out of the wall, near the ceiling, so as to open a direct communication between the room and the chimney. Any occasional temporary inconvenience of downdranght will be more than compensated by the beneficial results of this simple ventilating process. As an improvement upon these chimney openings, Dr. Arnott has devised a balanced metallic valve, to prevent, during the use of fires, the escape of smoke into the room. The advantages of these openings and valves were soon so manifest, that the Referees appointed under the Building Act added a clause to their bill allowing the introduction of the valves, and directing how they are to be placed, and they are now in very extensive use. By Dr. Arnott's recommendation, in a crowded dispensary in St. James's-parish, openings were made in the chimney-flues of the rooms near the ceilings, by removing a single brick, and placing there a piece of wire-gauze, with a light curtain-flap hanging against the inside, to prevent the issue of smoke in gusty weather. The decided effect produced at once on the feelings of the inmates was so remarkable, that there was an extensive demand for the new appliance. Most of the hospitals and poorhouses in the kingdom have now these chimney-valves, and most of the medical men and others who have published of late on sanitary matters, have strongly recommended them. Dr. Arnott has freely offered this and other means of ventilation to the public; but persons desiring to use them, should be careful to employ competent makers: they are to be had of ironmongers.



PATENT AIR-SYPHON VENTILATOR.

This new mode of ventilation has been patented by Dr. Chowne, 8, Connaught-place West, Hyde-park, and is based on his finding that, "if a bent tube or hollow passage be fixed with the legs upwards, the legs being of unequal lengths, whether it be in the open air or with the shorter leg communicating with a room or other place, that the air circulates up the longer leg, and that it enters and moves down the shorter leg; and that this action is not prevented by making the shorter leg hot, whilst the larger leg remains cold; and no artificial heat is necessary to the longer leg of the Air Syphon, to cause this action to take place." Thus, by using the chimney of an ordinary room, for example (into which air has free access), as the longer leg, and by conducting a tube or channel constituting the short leg of the Air-Syphon, from any part (as near the ceiling, for instance), into the lower part of the chimney, at the suitable place, a stream of air will proceed from the apartment down the shorter leg, and away up the longer one.

The means of ventilation can be conducted by light zinc tubes passing round and through a room, and finally into the fire-place; and tubes passing from these to the upper parts of the room, the warm air would constantly descend through them to the continuous channel, and then into the larger leg of the Syphon.



The Air-Syphon Ventilator admits also of being extemporaneously and temporarily set up in a sick-room, so as to cause a constant removal of air from the upper portion of the apartment, where it is so apt to hang about the curtain furniture of the chamber, and to impregnate it with the exhalations which are so often the result and generators of disease.

A peculiar fact is, that this mode of ventilation affords facilities hitherto not known for carrying away the heat and other products of combustion from gas-burners, and other lamps, of which the products are offensive. Again, wherever the Air-Syphon Ventilator is in operation, it is certain, that, should an accidental escape of gas take place, it will not accumulate, but descend from the upper part of the room, by means of the shorter leg of the syphon.

In the accompanying Illustration, the dotted lines represent the concealed pipes, about two inches in diameter, which are brought down to the chimney opening, and concealed behind the upper part of the jambs. In like manner, the pipe may be conducted from the bottom of an ornamental vase into the flue; when the air would take the course shown by the arrows, and thorough ventilation be thus immediately established.

DANGER FROM STOVES, FLUES, AND PIPES.

It is seldom that dwelling-houses and such-like buildings take fire and are burnt from the common accidents against which it is practically impossible wholly to guard, such as those which occur to the lighter moveable furniture, and to the drapery used in them; but, for the most part, the danger arises from the exposure of timber, in some form or other, in or about the structure, to the continued action of fire, or of heat, capable, sooner or later, of inducing the combustion of timber; and, as the source is most commonly in some stove, furnace, flue, pipe, or other tube for generating or for conveying heat, or for removing the products of combustion, much of the real danger to buildings from fire would be prevented by preventing that degree of proximity between timber and all such things as can lead to the combustion of the timber. That buildings do not take fire and burn more frequently than they do so, proves that to a great extent precautions are taken, and that dangerous proximity between the conduits of fire or of heat in a condition to induce combustion and the combustible materials in the composition of buildings is prevented. The total number of fires in the metropolitan district in the twelve years from 1833 to 1845 inclusive was 7285, of which the causes of 5515 only were known, and of these 1165 were found to have arisen from flues, and fire-places improperly constructed, from furnaces, heating and cooking apparatus, pipe-stoves, drying-stoves, bakers' ovens, and kilns. The daily returns made by the London Fire-Engine Establishment to the insurance-offices state the supposed causes of the fires which occur, and from these it appears that more than one-half of the fires *which have reached the structure of buildings*, are considered to have originated in defective or over-heated chimney-flues, in dead flues, or in some of the many varieties now in use of stoves and furnaces, and their metal tubes or other adjuncts and accessories for the purpose of distributing heat, and, in some cases, for removing heated air, as in removing the product of the combustion of gas. Further investigation generally justifies the supposition of the officers of that establishment as to the cause of the fire in any case, and for the most part proves that the danger had arisen, not from accident, properly so called, but from arrangements which admit of casualty, and, generally, arrangements made contrary to existing legislative provisions for preventing such casualties. A valuable building, used as a club-house, in Gresham-street, in the city of London, was seriously damaged by fire, from the placing of a series of small furnace-fires, to form what is termed a hot-plate, upon the wooden and timber-formed floor of the kitchen of the club-house, the thin brick hearths of the furnaces being literally bedded upon the flooring-boards. The Metropolitan Buildings Act provides "as to every furnace used for the purposes of trade or manufacture, that it must not be placed upon nor within a distance of eighteen inches of any timber or wood-work."—From "A Guide to the Proper Regulation of Buildings, Streets, Drains, and Sewers," by William Hosking, Architect and C. E.

BELL-TRAPS.

To protect buildings from the foul air generated in, or returning by, their own drains, the waste-ways should be double trapped—by a Bell-trap at the sink where waste water enters from the surface, and by a well-trap, or what workmen term, in plainer language, a stink-trap, short of the inlet to the drain; and the communication between the waste-way and the drain should have such a fall, or be so much above the bottom of the drain, that the overflow may be always from the well into the drain, and not from the drain into the well. If, however, bell-traps might be soldered down, and it were done, well-traps in addition would be unnecessary. Bell-traps are commonly left loose, because many substances which pass through the grating or strainer of the trap refuse to pass the trap, either floating so that they cannot go under the lip of the bell, or sinking in the well so that they do not get over the standing end of the drain pipe; and as tea-leaves, rice, and other matters arising from the washing of plates and dishes, the ravelled threads of housecloths, hair from brooms, and many other such like matters, find their way to the grating in the sink, or at the drain-head, and enough of them pass through and lodge in the well into which the bell is dipped, the escape becomes choked, and the trap requires to be lifted to clear the way. To solder down bell-traps is, therefore, to render the sinks useless, unless they are protected from access of such obstructions, or means be devised of clearing them away. They may be protected by a wire strainer over the sink, to stop everything that can tend to choke a bell-trap before it can reach the grating; or any ordinary obstruction may be cleared by forcing all such matters as will pass the grating of a bell trap to go under the lip of the bell, and to rise over the end of the stand-pipe, and so pass away into the drain, and the requisite force may be obtained from a slight head of water by means of a very simple apparatus that may be always at hand in every house—a tin or other cheap metal tube of three or four feet in length, funnel-shaped at each end, and the edges formed or bound with caoutchouc, so that, when stood on end and pressed firmly down, there may be a water-tight joint. This instrument placed over the grating of any bell-trap so as to embrace it fully, and filled with water, the pressure will be sufficient to clear away any ordinary obstruction from the trap, and render it unnecessary to leave the trap loose. Such an apparatus may be applied by any maid-servant, and to any sink in or about a house, wherever, it must be added, there is clear height enough for it to be placed upright, though it is capable of being articulated to bend in some slight degree; and it may be made telescope fashion, to give the means of increasing the pressure if need be.—*Ibid.*

SEA SIDE NUISANCES.

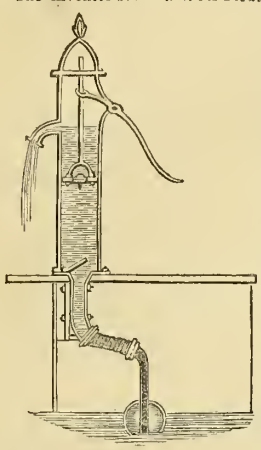
The inhabitants of, and visitors to, many of our sea-side watering-places are often exposed to annoyance, and sometimes to injury, from the discharge of the town drainage upon the much-frequented sea-beach. Cast-iron mains are commonly used at these places to conduct the soilage from the sewers and drains a little way out from the land, and these are commonly allowed to terminate at half-tide level or thereabouts, so that they are for half their time discharging noisome and pestilential streams under the nostrils of those who betake themselves to the beach for air and exercise. But ladies, with books or with needle-work, and nurses with their charges, are apt to resort to the propped-up and clean-looking round iron pipes for the convenience they offer as seats; and as they sit, they, and the children who play about them, inhale the poisonous gases which the soilage of the town emits, and many a family returns inland from the sea-side fevered with the stench at the sea-beach rather than invigorated by the sea-breezes. A few years ago the writer of these lines brought his family home to London, after a six weeks' residence at a sea-side watering-place, with all his children ill, and one of them seriously so, with fever, which resulted in the measles, brought on, he then believed, and still considers, by the cause alluded to. There were some of the town sewer pipes running out to half-tide distance

in the most accessible part of the beach, and upon some of these his children's nurse would seat herself day by day with the baby on her lap, and with the elder children playing about her, and with the children of other families similarly exposed to the same danger.—*Ibid.*

PATENT FLOATING FILTERING PUMP.

This new Pump, for cleansing and filtering unwholesome water, is the invention of Mr. S. Cheavins, of Donington, in Lincolnshire. Its advantage is to procure a pure and wholesome, as well as an abundant supply—results which, it is believed, have not hitherto been combined in a pump.

The inventor states that his Floating Filtering Pump has been tested in a tidal river, and is now used in the extensive brewery in Spalding, where it furnishes a constant and abundant supply of wholesome water, entirely free from the sand and filth which the old leaden pipes, by being placed nearly to the bottom of the water, were in the constant habit of contracting, thereby preventing the engine from obtaining a sufficient quantity of water for the supply of the brewery; and, as a still greater proof of its utility, it may be added, that it has been frequently surrounded with the weeds and rubbish carried down the river, and yet has never, in one single instance, failed to produce a copious supply. Water is sweeter and purer at the surface than it is at the bottom, and the Floating Filter totally ejects filth of every description, such as worms, &c., and all impurities of the smallest kind. The common pump, in consequence of the pipe descending within six or eight inches of the bottom, draws up with the pure water every pernicious sediment within its reach. On the other hand, the Floating Filter, by taking a supply of water within four or six inches of the surface, and rising and falling with the water, at once secures it from all sediment; and should there be any light filth floating in the same, the Filter totally ejects it, and will supply hundreds of tons of pure and wholesome water daily if required.



The importance of the purity of water for drinking was never better understood than in the present age of sanitary improvement. Now, the Patent Filter may be fixed to tanks and butts, so as to remove all apprehension of unwholesomeness in the water by any impurity drawn up with it. The Filter can also be attached, without difficulty, to pumps of the old construction.

We have seen Mr. Cheavins's Floating Filtering Pump at work, and can fully attest its successful operation.

WRIGHT'S PATENT VULCAN CHIMNEY-SWEEPING MACHINES.

The inefficacy of machinery for sweeping tortuous, angular, and irregular chimneys, has long been matter of complaint; and has, in some instances, led to the return to the employment of climbing-boys, which the application of machines was intended to supersede. The common failure of the machines hitherto used has been that they swept equally both ways, and left much of the soot in the chimneys.

The Patent Vulcan Sweeper is capable of contracting and expanding by the use of a cylinder or band of vulcanised india-rubber, upon which separate little brushes are so placed, that in ascending they easily press backwards, and leave the soot on the slopes, in the same manner as the common brush; whereas, on the return of the machine, the pressure on the little brushes being reversed, they stand firmly out and hold the head in the middle of the flue, sweeping all before it. The cylinder is fixed under a cap, and is protected from all external obstacles. The six little brushes form a round head, when all at liberty, but each one can dip down independently of the other when required to do so. There are, also, universal joints of a novel character, constructed with the vulcanised india-rubber; and, in cases where the chimney pots are very contracted, a small pilot brush, with very stiff whalebone to scratch off the hard soot, precedes the main one, and thus averts the necessity of its being squeezed through the narrow orifice, which is always attended with more or less danger to the pot, and requires so great a range of elasticity in the machine as to render it weak and inefficient in large flues. The Vulcan machines are employed in various ways, and of different sizes, to sweep stove-pipes, and every kind of chimney. They are manufactured and sold by Mr. Every, at Quarndon, near Derby.

PRECAUTIONS AGAINST CHOLERA.

Medical authorities are agreed that the remedies proper for the premonitory symptoms of cholera are the same as those found efficacious in common diarrhœa; that the most simple remedies will suffice, if given on the first manifestation of this symptom; and that the following, which are within the reach and management of every one, may be regarded as among the most useful, namely, 20 grains of opiate confection, mixed with two tablespoonfuls of peppermint-water, or with a little weak brandy-and-water, and repeated every three or four hours, or oftener, if the attack is severe, until the looseness of the bowels is stopped; or an ounce of the compound chalk mixture, with 10 or 15 grains of the aromatic confection, and from five to ten drops of laudanum, repeated in the same manner. From half a drachm to a drachm of tincture of catechu may be added to this last, if the attack is severe.

Half these quantities should be given to young persons under fifteen, and smaller doses to infants.

It is recommended to repeat these remedies night and morning, for some days after the looseness of the bowels has been stopped. But, in all cases, it is desirable, whenever practicable, that even in this earliest stage of the disorder, recourse should be had to medical advice on the spot.

Next in importance to the immediate employment of such remedies, is attention to proper diet and clothing. Every article of food which is known to favour a relaxed state of the bowels should, as far as possible, be avoided—such as every variety of green vegetable, whether cooked or not, as cucumber and salad. It will be important, also, to abstain from fruit of all kinds, though ripe, and even cooked, and whether dried or preserved. The most wholesome articles of vegetable diet are, well-baked, but not new, bread; rice, oatmeal, and good potatoes. Pickles should be avoided.

The diet should be solid rather than fluid; and those who have the means of choosing should live principally on animal food, as affording the most concentrated and invigorating diet; avoiding salted and smoked meats, pork, salted and shell-fish, cider, perry, ginger-beer, lemonade, acid liquors of all descriptions, and ardent spirits.

Great moderation, both in food and drink, is absolutely essential to safety *during the whole duration of the epidemic period.* One single act of indiscretion has, in many instances, been followed by a speedy and fatal attack.

On account of the intimate connexion between the external skin and the internal lining membrane of the bowels, warm clothing is of great importance. The wearing of flannel next the skin is therefore advisable. Recent experience on the Continent seems to show that it was useful to wear in the day-time a flannel bandage round the body, and this may become necessary in our own country during the damp and cold weather of the approaching season.

Particular attention should be paid to keeping the feet warm and dry; changing the clothes immediately after exposure to wet; and maintaining the sitting and bed-rooms well aired, dry, and warm.

It may be necessary to add a caution against the use of cold purgative medicines, such as salts, particularly Glauber salts, Epsom salts, and Seidlitz powders, which, taken *in any quantity,* in such a season, are dangerous. Drastic purgatives of all kinds should be avoided, such as senna, colocynth, and aloes, except under special medical direction.

If, notwithstanding these precautionary measures, a person is seized suddenly with cold, giddiness, nausea, vomiting, and cramps, under circumstances in which instant medical assistance cannot be procured, the concurrent testimony of the most experienced medical authority shows that the proper course is to get as soon as possible into a warm bed; to apply warmth by means of heated flannel, or bottles filled with hot water, or bags of heated camomile flowers, sand, bran, or salt, to the feet and along the spine; to have the extremities diligently rubbed; to apply a large poultice of mustard and vinegar over the region of the stomach, keeping it on fifteen or twenty minutes; and to take every half-hour a tea-spoonful of sal volatile in a little hot water, or a dessert-spoonful of brandy in a little hot water, or a wine-glass of hot wine whey, made by pouring a wine-glass of sherry into a tumbler of hot milk: in a word, to do everything practicable to procure a warm, general perspiration, until the arrival of the medical attendant, whose immediate care, under such circumstances, is indispensable.

It has not been deemed necessary or proper to give instructions for the treatment of the advanced stage, from the confident expectation that the proposed arrangements will supply medical attendance to all cases that may reach that condition, by which means the specific symptoms of each individual case will receive their appropriate treatment.

Whatever is preventive of cholera is equally preventive of typhus, and of every other epidemic and constantly recurring disease; and the attention of all classes is earnestly called to the striking and consoling fact, that, formidable as this malady is in its intense form and developed stage, there is no disease against which it is in our power to take such effectual precaution, both as collective communities and private individuals, by vigilant attention to it in its first or premonitory stage, and by the removal of those agencies which are known to promote the spread of all epidemic diseases.—*Abridged from the Report of the General Board of Health, to July,* 1849.

DISINFECTING PROCESS.

In all times of epidemic, it is desirable that householders should be warned of the necessity of looking to the state of the sinks, drains, cesspools, water-closets, &c, and that, as a means of prevention, those receptacles should be cleansed by pouring down them a solution of chloride of lime, and that this should be done simultaneously throughout the neighbourhood, in order to produce an effect on the public sewers; this mode of purifying being adopted at one time: thus, in 1849, it was publicly recommended, between the hours of nine and ten on each Saturday morning. This plan was carried out at Tottenham for several weeks, and here no case of cholera occurred, nor were the cases of diarrhœa more frequent or severe than usual at that season of the year. Chloride of lime may be had of any druggist. Two ounces is sufficient to be stirred into a pail-full of water, and costs only one penny.

ORIGIN OF THE "BILLS OF MORTALITY."

The Bills of Mortality were commenced in the reign of Queen Elizabeth, and ever since the year 1603 have been published by authority in London. In this respect the English metropolis stands alone; no weekly tables of the causes of the death of every inhabitant are published in the capital of any other European state. Various motives for the measure have been assigned; but the fact of continuous publication from a period anterior to the appearance of newspapers and gazettes, is remarkable and characteristic. It may be fairly referred to the natural inclination of the English people, when they are in trouble, to know the truth, and to see in figures the precise extent of their losses, although at times the sight might well make the courage of the bravest quail. On the Continent, "precautions" were used in publishing the mortality of cholera in 1849; and the deaths from all causes were not made known.

The parish-clerks of London, in the seventeenth century, when the plague was at its height, counted the deaths and reported the supposed causes; and the citizens, when the death-cart traversed the streets, anxiously studied the bill, surrounded by its gloomy symbolical border, announcing 8297 deaths in a week, out of a population of 600,000. Returns just published by order of the House of Commons, show that the total number of new houses built within the metropolitan police districts since January 1, 1839, up to September, 1849, amounts to 64,058; and the number of new streets formed to 1652, in length 200 miles. The increase of population from 1839 to 1849, within the said district, is estimated at 525,004; the total population of the metropolitan district being now about 2,336,960. In the hands of Price, Heberden, Willis, Bateman, and other statists, these records have disclosed the laws of mortality, and the causes of the insalubrity of the present cities.

STATISTICS OF METROPOLITAN BURIAL-GROUNDS.

In area, the parochial grounds take up 176 acres and 3-10ths; the Protestant Dissenters, 8 acres and 7-10ths; the Roman Catholics, 3-10ths of an acre; the Jews, 9 acres and 2-10ths; Swedish Chapel, 1-10th; undescribed, 10 acres and 9-10ths; private, 12 acres and 6-10ths. Total of intramural, 218 acres and 1-10th; total of new cemeteries, 260 acres and 5-10ths.

	Annual No. of burials exclusive of vault burials	Average annual No. of burials per acre.	Highest No. of burials per acre in any ground.	Lowest No. of burials per acre in any ground.
Parochial grounds ..	35,747 ..	194 ..	2073 ..	11
Protestant Dissenters	1715 ..	197 ..	1210 ..	6
Roman Catholics ..	270 ..	1043 ..	1613 ..	814
Jews	340 ..	33 ..	52 ..	13
Swedish Chapel ..	10 ..	108 ..	— ..	—
Undescribed	2197 ..	294 ..	1109 ..	5
Private	5112 ..	405 ..	2323 ..	59
Total intramural ..	44,355 ..	203 ..	1080 ..	46
Total of new cemeteries	3336 ..	13 ..	155 ..	4
Vault burials	789 ..	— ..	— ..	—

It is computed that it requires seven years for a layer of bodies to decay in the metropolis.—*Banfield and Weld's Statistical Companion.*

RURAL ECONOMY.

CHOICE OF FOWLS, ETC.

THE most important varieties of Fowl are the Cochin China, the Malay, the Spanish, the Dorking, the Old Sussex, the Hamburg, the Polish, the Columbian or Mongolian, the Bantam, and the Game Fowl.

The *Cochin China* is usually of a bright bay colour, darker above with a black horse-shoe mark upon the breast, wings borne tightly up, bearing erect and lively, whole form approaching to that of the Bustard, comb and wattles large and simple. This fowl was introduced into Great Britain some years back by Her Majesty, and it is truly a Royal bird. The hen is prolific to an extraordinary degree; "Bessy," when in the possession of the Queen, is stated to have laid an egg daily for 95 successive days—a degree of fecundity unrivalled by any other variety. These hens, also, repeatedly lay two, and even three eggs per day, for many days in succession. The flesh is excellent, but the bird is much too scarce and costly for general use. The cock is *game* to the last degree, capable of killing the most powerful game-cock in a few minutes.

The *Malay* is nearly as large as the Cochin China; but it is not a good bird in flesh. The hen does not lay so large an egg as her size would promise. The Malay fowl is, however, valuable for crossing with other varieties.

The *Spanish* is known by its jet black colour, large *toothed* comb and wattles, and white cheek or earpiece. This is one of the very best birds, it is fully climatised, and consequently hardy, and of beautiful appearance; possesses flesh of the best and whitest quality, and acquires it very rapidly: the hen lays a large egg, and is only surpassed in fecundity by the Cochin China.

The *Dorking* is remarkable for possessing five well-developed toes, and sometimes a rudimentary sixth, on each foot. This is a plump-bodied white-fleshed fowl, very good for table use: and the hen is tolerably prolific, but not equal in that respect to the Spanish. The *Sussex* has latterly, to a great degree, superseded the Dorking in popular estimation; in form and appearance; indeed, the birds are almost identical, save in colour—the Dorking being, when pure, usually of a speckled or *cuckoo* colour, and the Sussex being generally dark brown, sometimes relieved with white spangles. *White Dorkings* are prized by some, but they are delicate, and do not attain any size.

The *Hamburgh* and *Polish* resemble each other closely, are known by their large top-knots, and gay, or even gorgeous plumage. They are very ornamental, but not entitled to the notice of such as look chiefly or solely to pounds, shillings, and pence.

The *Columbian* or *Mongolian*, a native of South America, is a small and singularly beautiful bird, standing very erect. Its colour is a black ground, relieved about the head, neck, and wing coverts by numerous spangles of white, and here and there patches of brilliant green bronze. The comb of the cock is large, and the hen has one also; she has, too, a tuft of feathers below the bill, and two tufts springing, moustache-like, from the corners of the mouth. The egg laid by her is of extraordinary size, but she seldom lays more frequently than one every second day, and, during a considerable portion of the laying season, does not lay at all. As a *fancy fowl*, this may compete with the Cochin China; but its flesh is black and tough.

The *Bantam* is too well known to require description. The bay variety, with black spangles and naked legs, known as the "Sebright," is the most valuable. At the show in London, in February, 1847, three of these birds fetched the amazingly large price of fifty pounds and one shilling. The Bantam is singularly prolific, and the little egg is considered a delicacy peculiarly suited to the invalid, or to persons whose digestive powers have become impaired.

The *Game Fowl* are very prolific, are ready fatteners, and possess more delicate flesh than any other known variety. If they can be kept strictly apart, well and good; otherwise their pugnacity renders them unfit inmates of the general poultry-yard, as their individual value will by no means compensate their keepers for the injury they may do to other, and probably more valuable birds.

Her Majesty's poultry-keeper, Mr. Walters, made the experiment of crossing the Dorking with the Cochin China fowl, and a noble and valuable breed was the result. Mr. Burgess, of Pill-lane, Dublin, has the merit of having established an entirely new and valuable variety, known as "Burgess' Black," by a cross between Spanish and Malay, grafted with Dorking. The Sussex or Dorking makes a good cross with the Spanish. The Columbian and Sussex produces an admirable bird, possessing excellent shape, great fecundity, and retaining the characteristic of laying eggs nearly as large as those of a goose. The advice to the farmer on the subject of crossing is, that he keep as a standing stock, Spanish and Sussex; that he also have, if possible, a Cochin China cock, but in any case a Malay cock. In this manner, be will, by cautious admixture, gradually arrive at his desideratum. The Sussex possesses the highest perfection of form; the Spanish the best flesh, and laying qualities of a high character; while the Malay gives increased size, and if it be the Cochin China which is employed for that purpose, also increased fecundity. Let the reader follow this advice, and he will find himself amply compensated for any trouble or preliminary expense he may be at, by the large returns he will experience in the substantial and satisfactory form of *pounds, shillings*, and *pence*.

Most properly kept and properly fed fowl have, in January, begun to lay, and it is then advisable to set the eggs as early as you can collect a clutch. These early chickens will be ready the sooner to meet the market, and such as are to be kept will be the better able to endure, uninjured, the temperature of the ensuing winter.—*Abridged and selected from a paper by Mr. H. D. Richardson, in the Agricultural and Industrial Journal, No.* 1.

To make Hens Lay Perpetually.—Keep no roosters; give the hens a very small portion of fresh meat chopped up like sausage meat, say half an ounce a day to each hen, during the winter, or from the time insects disappear in the fall till they appear again in the spring. Never allow nest eggs. The only reason why hens do not lay all winter as freely as in summer is the want of animal food, which they get in summer in abundance, in the form of insects. The writer assures us that he has for several winters reduced his theory to practice, and proved its entire correctness.

Rules in Raising Poultry.—1. All young chickens, ducks, and turkeys should be kept under cover, out of the weather, during rainy seasons. 2. Twice or thrice a week, pepper, shallots, shives, or garlic should be mixed up with their food. 3. A small lump of assafœtida should be placed in the pan in which water is given them to drink. 4. Whenever they manifest disease, by the drooping of the wings, or any other outward sign of ill-health, a little assafœtida, broken into small lumps, should be mixed with their food. 5. Chickens which are kept from the dunghill while young seldom have the gapes; therefore it should be the object of those who have the charge of them so to confine the hens as to preclude their young from the range of barn or stable yards. 6. Should any of the chickens have the gapes, mix up small portions of assafœtida, rhubarb, and pepper, in fresh butter, and give each chicken as much of the mixture as will lie upon one-half the bowl of a small teaspoon. For the pip, the following treatment is judicious:—Take off the indurated covering on the point of the tongue, and give twice a day, for two or three days, a piece of garlic the size of a pea. If garlic cannot be obtained, onion, shallot, or shives will answer; but if neither of these be convenient, two grains of black pepper, to be given in fresh butter, will answer. 8. For the anuffles, the same remedies as for the gapes will be found highly curative; but, in addition to them, it will be necessary to melt a little assafœtida in fresh butter, and rub the chicken about the nostrils, taking care to clean them out. 9. Grown-up ducks are sometimes taken off rapidly by convulsions; in such cases, four drops of rhubarb and four grains of cayenne pepper, mixed in fresh butter, should be administered. Last year we lost several by this disease, and this year the same symptoms manifested themselves among them; but we arrested the malady without losing a single duck, by a dose of the above medicine to such as were ill. One of the ducks was at the time paralysed, but was thus saved.—*Canterbury Journal.*

Wasps' Nests.—These troublesome insects appeared during the past year in great numbers. It is not always possible completely to demolish the nest. The following contrivance for entrapping the stragglers will be found useful. Bury a wine bottle in the ground, so that the mouth alone shall be uncovered. The experiment will be the surer if a small quantity of sugar and water, or honey, be left at the bottom of the vessel. The wasps will get into the bottle, and be unable to effect an exit; and in a short time it may be taken up chokefull of carcases.

Cure for Bee-Stings.—The only *positive* and *immediate* cure for a bee-sting we have ever heard of, that may be depended on in *all* cases, is tobacco. The manner of applying it is as follows:—Take ordinary fine-cut smoking or chewing tobacco, and lay a pinch of it in the hollow of your hand, and moisten it and work it over until the juice appears quite dark-coloured; then apply it to the part stung, rubbing in the juice, with the tobacco between your thumb and fingers, as with a sponge. As fast as the tobacco becomes dry, add a little moisture and continue to rub and press out the juice upon the inflamed spot during five or ten minutes; and, if applied soon after being stung, it will cure in *every* case.—*Miner's American Bee-Keeper's Manual.*

BUTTER-MAKING.

In the Valais, Dr. Forbes, the celebrated physician, assures us, Butter is preserved sweet, or, at least, perfectly fit for use, through the whole season, *without any admixture of salt.* The following is the way in which it is treated:—"A narrow deal board, not more than four or five inches wide, is fixed horizontally in an open place in the dairy; wooden pins, from two to three feet in length, are fixed in an upright position into this, their whole length projecting above its surface. As the butter is made it is placed daily around these pins (one at a time), beginning at the lower end, and in a mass not exceeding at first the width of the board. Every day, as more butter is made, it is added to the previous portion around the pin, the diameter of the growing mass being gradually enlarged upwards, until the upper surface overhangs the base to a considerable extent, like an inverted beehive. When one pin is filled, another is proceeded with in like manner, and so on. The exposed surface of these masses gets soon covered with a sort of hard film, which effectually excludes the access of the air; and this circumstance, with two others—viz. the complete expression of milk from the butter, and the unobstructed circulation of a cool mountain air through the *châlet*, will go far to explain how butter so treated can remain so long without becoming spoiled." Dr. Forbes also gives the following mode of preparing the winter store of butter, or what is called in the Valais and Piedmont *beurre cuit*, or boiled butter, which the Doctor considers much more advantageous to health and comfort than the cheap salt butter sold in England:—"Into a clean copper pan (better, no doubt, tinned) put any quantity of butter, say from twenty to forty pounds, and place it over a very gentle fire, so that it may melt slowly; and let the heat be so graduated that the melted mass does not come to the boil in less than about two hours. During all this time the butter must be frequently stirred, say once in five or ten minutes, so that the whole mass may be thoroughly intermixed, and the top and bottom change places from time to time. When the melted mass boils, the fire is to be so regulated as to *keep* the butter at a gentle boil for about two hours more; stirring being still continued, but not necessarily so frequent as before. The vessel is then to be removed from the fire, and set aside to cool and settle, still gradually; this process of cooling being supposed also to require about two hours. The melted mass is then, while still quite liquid, to be carefully poured into the crock or jar in which it is to be kept. In the process of cooling there is deposited a whitish cheesy sediment proportioned to the quantity of butter, which is to be carefully prevented from intermixture with the preserved butter. There are some variations in the process in the practice of different individuals, but everybody agrees in asserting that butter so preserved will last for years perfectly good, without any particular precautions being taken to keep it from the air, or without the slightest addition of salt."

To Correct Sourness in Milk, Cream, and Bread.—It is not generally known that the sourness of milk and cream may be *immediately* corrected by the addition of a small quantity of the common carbonate of magnesia, in powder. Half a teaspoonful (about equal to 4 grains) may be added to a pint of milk or cream, if only slightly sour; a larger quantity in proportion to the degree of sourness. From two to three grains may be added to every pound of flour to prevent sourness in bread—so injurious to health. Carbonate of soda is sometimes employed for the same purpose, but it communicates a very unpleasant flavour to the bread; and, in the case of milk or cream, is worse than the disease.

TO CURE HAMS.

Westphalia Hams.—Get the hams cut in the shape of Westphalias, long, narrow, and pointed at the end, and put them under a board, heavily pressed down, to flatten them. About four days after killed, rub them with common rough salt, particularly about the hip-bone and knuckle joints. After a day and a night, remove the salt, dry the hams with a coarse cloth, and rub into each 1 oz. saltpetre powdered finely, and let it lie for 24 hours. Then mix powdered saltpetre, 1 oz.; common salt, ½ lb.; bay salt, ½ lb.; coarse sugar, 1 lb.: make them hot in a pan—but be careful not to melt them—rub them well in while hot, all over the fleshy and rind sides, and finish with half a pound more common salt. Let the hams lie thus until a brine appears, strew bay-leaves both under and over, turn them every day, and rub them and baste them with the brine for three weeks; then take them out of pickle, and soak them in cold spring water for twenty-four hours; let them drain; wipe them with a cloth; rub them with coagulated pigs' blood, and put them to smoke for a week, well smothered. Or, a sort of Westphalia flavouring may be made of 100 parts of water, 4 of salt, 2 of brown sugar, 1 of Barbadoes tar, and 1 of spirit of wine. After it has been well mixed, and stood for several days, 3 table-spoonfuls may be mixed with the salt necessary to cure a ham.

Westmoreland Hams.—Procure a leg of pork, about 20 lb. weight; rub it well

with 3 oz. saltpetre, and let it lie 14 hours. Then mix stale porter or beer, 2 qts.; common salt, 2 lb.; coarse sugar, 2 lb.; bay salt, pounded, 1 lb.: boil and skim it well, and pour it hot over the meat. In this pickle the meat must remain one month, being rubbed and turned at least every other day. Then take it out, rub it dry, and roll it in malt-dust, or oatmeal; smoke the ham three weeks, and hang it in a dry but not warm room.

Warwickshire Hams.—Rub the leg of pork with 2 oz. powdered saltpetre, particularly about the hip-joint, and let it lie 24 hours. Then mix soft water, 1 gallon; pale dried malt, 1 peck; sugar or treacle, 1 lb.; bay salt, bruised, 1½ lb.; common salt, 2½ lb.; shalots or onions, sliced, 3 oz. Boil together ten minutes; skim the pickle; pour it hot over the meat, and let the grains remain until they begin to be sticky, when they may be drained in a sieve, and removed. Keep the hsm covered with this pickle for three weeks, and turned and rubbed every day for three weeks, when it may be taken out, dried with cloths, and smoked three weeks or a month. Put the ham into a box with malt-dust, and cover from the air with sand dried in an oven. The three preceding receipts are from "The Whole Art of Pickling, Curing, and Smoking Meat and Fish," by James Robinson, eighteen years a practical curer.

Beef Pickle, à la Garrick. (*Red.*)—Take 20 lb. of salt, ¾ lb. saltpetre. 4 cakes sal prunella, 2 lb. moist sugar, and 2 cloves of garlic. Pound and mix all together, rub with it the meat, cover it for about a week, rubbing and turning it every other day.

WINE FROM THE RHUBARB STALK.

Mr. Roberts, of Edinburgh, has appended to the fifth edition of his "British Wine-maker and Domestic Brewer," a Supplement on the Rhubarb Plant, showing it to be a basis nearly as valuable as that of the Grape for producing Champagne, Hock, Madeira, and Constantia. If sweet wine be required, six pounds weight of stalk to a gallon of water will be a proper proportion; but if a dry wine, to imitate Hock, Vin Grave, &c., is wished, more than double that weight will be necessary. The rhubarb should be used as soon after being cut as possible; and if it be of superior quality, the stalks, when ground or grated, and thoroughly pressed, will yield about eighty per cent. of juice; so that, by using 13 pounds, we should have rather more than 10 pounds of juice, and by adding one gallon of water to every 13 lb. of rhubarb stalk, when pressed, we should have two gallons of juice and water; viz. ten pounds of rhubarb juice giving one gallon. and 10 lb. of water giving one gallon. This mixture, made with 13 lb. of rhubarb stalk to the gallon, will take about 3½ lb. of sugar to each gallon, which should be the finest East India or crusbed sugar; the sugar giving an excess in quantity of 1½ pint to each gallon.

The requisite implements and utensils are a small apple-mill, a fermenting tub, a cask of the same description, but less in size (say 18-gallon), with two or three tap-holes on a line in the front, and near the bottom; the top being taken out, and a flat circular slab of wood, with a few perforated holes, made to fit the interior. This slab, with one or two half-hundredweights placed on it, is to act the pulp-press. Next will be required a sherry quarter-cask, capable of containing about 28 gallons; two tubs, similar to washing-tubs, each to hold 15 gallons—one to receive the pulp from the mill, the other to receive the juice from the press; a hair sieve and stand complete the utensils.

Assuming the quantity of Hock to be made is 27 gallons, with two additional gallons for casking, the weight of rhubarb stalk required will be 156 lb., to be ground in the apple-mill, the pulp running into a tub placed under the spout, and then put into the small cask or press. This press is also placed on a stand, so as to admit the other tub under it to receive the pressed juice which flows from the tap-holes. The juice is then strained through a sieve into the fermenting-tub. Meanwhile, the slab with the weights upon it is put on the pulp in the press, and the pressed juice thus procured strained and added to the former; and in an hour or so the corks may be replaced in the tap-holes, and the slab and weights removed.

The juice which has been strained into the fermenting-tub will measure about 12 gallons. Twelve gallons of water, if possible at the heat of 80° to 100°, are to be poured on the pressed pulp in the small cask or press, the whole thoroughly agitated, and then allowed to remain eight or ten hours, in order to extract what value may have been left in the pulp; after which this liquor is to be drawn off, and added to the juice in the fermenting tub. The pulp is to undergo a second pressing with the slab and weights, and the pressed liquor is to be added to the former juice, which should measure now, in the whole, 24 gallons.

Eighty-four pounds of sugar—the whiter the better—are next to be put to the juice and water in the fermenting-tub, which will cause it to measure about 29 gallons. With this sugar should be put in three-quarters of a pound of tartaric acid, thoroughly dissolved in a little boiling water; and the whole should be then well mixed together.

The fermenting-tub, containing the *must*, is to be placed in a warm situation, and the *must* weighed with a saccharometer, which will indicate perhaps a degree or so more or less than the required standard, 26, *i. e.* 130. If more, a little boiling water may be added to reduce it; if less, as much sugar as will bring the *must* up to that point.

It is then allowed to ferment until it is reduced in gravity to 80 or 90, being in the interval carefully stirred and weighed. When reduced to 80 or 90, it is to be casked in a newly-emptied sherry quarter-cask, of 27 or 28 gallons. There will be enough *must* to fill the cask at first, and to continue filling it during the time it remains unbunged; the cask being placed obliquely upon a stand, with a dish under it. During the time the wine is fermenting, and before it is bunged down, it should be tried with the saccharometer once a week; and when reduced to one-half its original gravity, say 65, the cask may be bunged down, and the wine allowed to remain undisturbed until October or November, supposing it to have been made in May or June. By this time it should be reduced to 30 of gravity. If, however, at any of these examinations it is found that the wine has attenuated below 30 before the period just mentioned, it must be immediately racked off, to prevent its being too much reduced.

It is then advisable to get another newly-emptied sherry quarter-cask, and to fumigate it twice at about an hour's interval; 2½ gallons of the finest Somersetshire cider, with half a gallon of Bucellas wine, are to be put into the cask, to be bunged and well rolled about to incorporate the fumes of the brimstone with the contents. The clear portion of the wine is then to be racked into it, leaving room for the finings, usually consisting of a little isinglass dissolved in sour wine.

A very delicious and cheap wine may be made from rhubarb stalks 6½ lb. to every gallon of water, and 3½ lb. of sugar to each gallon of juice and water. The rhubarb is ground to a pulp in an apple-mill, and the juice then pressed out of it; it is worked as other home wines, and fined by adding 4 lb. of sugar-candy, dissolved.

Cold Cream.—Warm gently together four ounces of oil or almonds and one ounce of white wax, gradually adding four ounces of rose-water. This will make good cold cream, whereas that sold in the shops is usually nothing more than lard beat up with rose-water.

COOKERY.*

White Haricot Beans.—Nothing is so cheap or so solid food as haricot beans. Get a pint of fine white beans, called the dwarf; put them into half a gallon of cold soft water, with one ounce of butter; they take about three hours to cook, and should simmer very slowly; drain them and put them into a stewpan, with a little salt, pepper, chopped parsley, two ounces of butter, and the juice of a lemon, place on the fire for a few minutes, stir well, and serve. The water in which it is boiled will not make a bad soup by frying four onions in butter in a stewpan, adding a little flour, then the water poured over, and a slice of toasted bread cut in pieces, and served in a tureen. Should the water in boiling reduce too fast, add a little more. The longer sort requires to be soaked a few hours before boiling.

Irish way of Boiling Potatoes.—In Ireland, where this root has been for so long a period the chief nourishment of the people, and where it takes the place of bread and other more substantial food, it is cooked so that it may have, as they call it, a bone in it; that is, that the middle of it should not be quite cooked. They are done thus:—Put a gallon of water with two ounces of salt in a large iron pot, boil for about ten minutes, or until the skin is loose, pour the water out of the pot, put a dry cloth on the top of the potatoes, and place it on the side of the fire without water for about twenty minutes, and serve. In Ireland turf is the principal article of fuel, which is burnt on the flat hearth: a little of it is generally scraped up round the pot so as to keep a gradual heat; by this plan the potato is both boiled and baked. Even in those families where such a common art of civilised life as cooking ought to have made some progress, the only improvement they have upon this plan is, that they leave potatoes in the dry pot longer, by which they lose the *bone*. They are also served up with their skins (jackets) on, and a small plate is placed by the side of each guest.

Beetroot.—Take two nice young boiled beetroots, which will require about from two to three hours to simmer in plenty of boiling water; peel when cold, cut in slanting direction, so as to make oval pieces; peel and cut in small dice two middling-sized onions, put in a pan, with two ounces of butter, fry white, stirring continually with a spoon; add a spoonful of flour, and enough milk to make a nice thickish sauce, add to it three salt spoonfuls of salt, four of sugar, one of pepper, a spoonful of good vinegar, and boil a few minutes; put in the slices to simmer for about twenty minutes, have ready some mashed potatoes, with which make a neat border in your dish one inch high, then put the beetroot and sauce, highly seasoned, in the centre, and serve.

Teal, a new method.—Procure four, draw them, then put half a pound of butter upon a plate, with a little pepper, grated nutmeg, parsley, a spoonful of grated crust of bread, the juice of a lemon, and the liver of the teal, mix well together, and with it fill the interior of the teal; cover them with slices of lemon, fold in thin slices of bacon, then in paper, and roast twenty minutes before a sharp fire; take off the paper, brown the bacon, dress them upon a slice of thick toast, letting the butter from the teal run over it, and serve very hot.

Pig's Cheek, a new method.—Procure a pig's cheek, nicely pickled, boil well until it feels very tender; tie half a pint of split peas in a cloth, put them into a stewpan of boiling water, boil about half an hour, take them out, pass through a hair sieve, put them into a stewpan, with an ounce of butter, a little pepper and salt, and four eggs, stir them over the fire until the eggs are partially set, then spread it over the pig's cheek, egg with a paste-brush, sprinkle bread-crumbs over, place in the oven ten minutes, brown it with the salamander, and serve.

Melted Butter.—Put into a stewpan two ounces of butter, not too hard, also a good tablespoonful of flour, mix both well with a wooden spoon, without putting it on the fire; when forming a smooth paste, add to it a little better than half a pint of water; season with a teaspoonful of salt, not too full, the sixth part that of pepper; set it on the fire, stir round continually until on the point of boiling; take it off, add a teaspoonful of brown vinegar, then add one ounce more of fresh butter, which stir in your sauce till melted, then use where required; a little nutmeg grated may be introduced; it ought, when done, to adhere lightly to the back of the spoon, but transparent, not pasty; it may also, if required, be passed through a tammy or sieve. If wanted plainer, the last butter may be omitted.

Fritadella (twenty receipts in one).—Put half a pound of crumb of bread to soak in a pint of cold water; take the same quantity of any kind of roast or boiled meat, with a little fat, chop it up like sausage meat; then put your bread in a clean cloth, press it to extract all the water; put into a stewpan two ounces of butter, a tablespoonful of chopped onions, fry for two minutes, then add the bread, stir with a wooden spoon until rather dry, then add the meat, season with a teaspoonful of salt, half the same of pepper, a little grated nutmeg, the same of lemon peel, stir continually until very hot; then add two eggs, one at a time, well mix together, and pour on a dish to get cold. Then take a piece as big as a small egg, and roll it to the same shape, flatten it a little, egg and bread-crumb over, keeping the shape, do all of it the same way, then put into a *sauté*-pan a quarter of a pound of lard, or clean fat, or oil; when hot, but not too much so, put in the pieces, and *sauté* a very nice yellow colour, and serve very hot, plain, on a napkin, or on a border of mashed potatoes, with any sauce or garniture you fancy. These can be made with the remains of any kind of meat, poultry, game, fish, and even vegetables; hard eggs or cold mashed potatoes may be introduced in small quantities, and may be fried instead of *sauté*, in which case put about two pounds of fat in the frying-pan, and if care is used it will do several times. This is an entirely new and very economical and palatable dish, and fit for all seasons, and if once tried would be often repeated; the only expense attending it is the purchase of a small wire sieve for the bread-crumbs. The reason it is called twenty receipts in one is, that all kinds of food may be used for it—even shrimps, oysters, and lobsters.

Batter for Fritters.—Take half a pound of flour, one ounce of butter (which melt), the whites of three eggs, well beaten, half a glass of beer, and enough water to make a thick batter.

New Mode of Making Coffee.—Choose the coffee of a very nice brown colour, but not black (which would denote that it was burnt, and impart a bitter flavour); grind it at home if possible, as you may then depend upon the quality; if ground in any quantity, keep it in a jar hermetically sealed. To make a pint, put two ounces into a stewpan, or small iron or tin saucepan, which set dry upon a moderate fire, stirring the coffee round with a wooden spoon continually until it is quite hot through, but not in the least burnt: should the fire be very fierce, warm it by degrees, taking it off every now and then until hot (which would not be more than two minutes), when pour over a pint of boiling water, cover close, and let it stand by the side of the fire (but not to boil) for five minutes, when strain it through a cloth or a piece of thick gauze, rinse out the stewpan, pour the coffee (which will be quite clear) back into it, place it upon the fire, and, when nearly boiling, serve with hot milk if for breakfast, but with a drop of cold

* From Soyer's "Modern Housewife."

milk or cream if for dinner. The foregoing proportions would make coffee good enough for any person, but more or less coffee could be used if required; the cloth through which it is passed should be immediately washed and put by for the next occasion. A hundred cups of coffee could be made as here directed in half an hour, by procuring a pan sufficiently large, and using the proper proportions of coffee and water, passing it afterwards through a large cloth or jelly-bag.

How to Make a Delicious Cup of Tea.—Before pouring in any water, the tea-pot, with the tea in it, should be placed in the oven till hot, or heated by means of a spirit-lamp, or in front of the fire (not too close, of course), and the pot then filled with boiling water. The result will be, to about a minute, a most delicious cup of tea, much superior to that drawn in the ordinary way.

Rhubarb Jam. (*Manchester Receipt.*)—Boil gently, for three hours, an equal weight of fine sugar and rhubarb-stalk, with the juice and grated rind of a lemon to each pound of the fruit. When the true flavour of the rhubarb is much liked, the lemon-peel should be omitted. A very good jam may be made with six ounces less of sugar to the pound, by boiling the rhubarb gently for an hour before it is added.

Coffee. French Fashion.—To a pint of coffee, made as before directed, add a pint of boiling milk, warm both together until nearly boiling, and serve.

NEW KITCHEN IMPLEMENTS.

M. Soyer, in his "Modern Housewife," (lately published), describes a Magic Lamp Stove, with which may be cooked, *on the breakfast-table*, a cutlet ham, or bacon, or eggs may be poached. In this new and portable apparatus, the heat is given by vapour of spirit of wine passing through a flame: it will cook cutlets, or boil water, in as short a time as the best charcoal; with the *sauté-pan* everything can be cooked as on a charcoal fire; and with a small saucepan anything that may be required in the room of an invalid, where the heat of a fire would not be allowed. In place of the kitchen-range, the hot-plate, and the charcoal stove, M. Soyer recommends a Gas Stove, which is very economical; the fire being left to go out after dinner, and some days not being even lit, it is exceedingly clean. This new stove is placed in the middle of the kitchen: it combines a roasting fire, circulating hot-water boiler, oven, and hot plate, all heated by one fire; the boiler heats the water at the top of the house for the baths, and which can be laid on into any room; the advantage is that it gives more room in the kitchen, in being able to walk all round it; there are also different degrees of heat on the hot plate, and room for the bain-marie pan: the smoke goes under the floor into the old chimney. It is made by Messrs. Bramah and Prestage, of Piccadilly. It could be fitted with a steam-boiler if required, and would be valuable in hotels and taverns: in a cottage, the linen could be dried around it without danger from fire; and it also cures smoky chimneys. There is very little heat arising from it.

HOW TO FIT UP A KITCHEN.

Among other improvements in kitchen fittings, the dressers are made with drawers and slides, which is very convenient, as anything dirty may be placed upon them, and the cloth be thus saved. The rail above contains all the copper stewpans. Another dresser is used for placing the dishes on when sending up the dinner: it has the covers over it; and underneath, the dripping pan, frying-pan, gridiron—so that nothing is hid from sight, therefore they cannot but be clean. This is a good plan; for those mysterious closets are often found full of dirt, broken plates, old towels, and everything that is wanted to be hidden from sight. There is a little scullery; it is supplied with hot and cold water, and has a sink, in which are washed the plates, dishes, coppers, &c., or anything else; so that all dirt is kept out of the kitchen; but this is every bit as clean as the kitchen. The larder is paved and lined with slate: the window, which is protected by wire, opens to the north. Under the window is the pastry-slab, with ice-drawer under that. In one corner is the meat block and table, with scales to weigh all that comes into the larder. Here is the safe, with a sliding door on pulley, and in which are the vegetable bins; and here, also, is one of Lings's patent ice-safes. The meat hangs from tin hooks. There are two boxes for powdered herbs of all kinds (Makepeaces), and also essences for confectionery. This is called the housewife's box.

The following stock of utensils is considered to be quite complete, and by no means too numerous:—8 copper stewpans, two larger ones holding one gallon and a half, and the next one gallon, the others smaller by degrees to one pint; 1 oval fish-kettle, holding about one gallon and a half—but if by chance you have a turbot, borrow a kettle from the fishmonger; 1 middle-sized braising-pan; 1 preserving-pan; 1 round bowl for beating whites of eggs; 2 sauté-pans; 1 omelette-pan; 1 frying-pan; 1 bain-marie; 6 saucepans for the sauce; 1 middle-sized tin pie-mould; 2 tin jelly-moulds; 1 tin flanc-mould for fruit; 1 freezing-pot, with every requisite; 2 baking-sheets; 1 gridiron; 1 small salamander: 1 colander-spoon; 1 bottle-jack; 2 spits; 1 dripping-pan; 1 screen; 1 sugar-pan; 2 soup-ladles; 8 copper spoons, two of them colanders; 2 wire baskets; 1 wire sieve; 2 hair sieves; 24 tartlet-pans; 2 tammies; 1 jelly-bag; 12 wooden spoons; 2 paste-brushes; 1 pair of scissors; 2 kitchen-knives; 6 larding-needles; 1 packing-needle; 1 box of vegetable-cutters; 1 box of paste-cutters; 1 meat saw; 1 cutlet-chopper; 1 meat-chopper; 6 meat-hooks, tinned; 1 rolling-pin; 8 kitchen basins; 6 china pie-dishes; 6 earthen bowls for soups and gravies; 4 kitchen table-cloths; 18 rubbers; 12 fish napkins; 6 pudding-cloths; 4 round towels. These utensils, no doubt, appear very numerous, but, at the same time, they are no more than are required; and it is only the first nine articles which are rather expensive: the others can be had at the cost of a few shillings. The linen should be placed in the presses every week, and an exact account kept of it; for it is only by so doing that so small a quantity can be kept in use. The stock consists of 12 pairs of sheets; 10 ditto pillow-cases; 3 dozen of napkins; 2 dozen and a half of various-sized table-cloths, including breakfast, dinner, &c., 6 servants' table-cloths; 3 dozen towels; 6 round towels; 3 dozen kitchen rubbers; 2 dozen napkins for fish, vegetables, and fruits; 6 pudding cloths: 2 dozen damask d'oylies; 1 dozen Berlin wool ditto. Occasionally in the wash are the cover of the carpet, the anti-macassars, and the netted window curtains. Of glass and china, provide the following; they should be counted every month, and the broken ones replaced; 3 dozen wine-glasses; 2 dozen champagne ditto; 2 dozen claret ditto; 3 dozen goblets; 6 water carafes; 6 decanters; 1 liqueur stand, 12 liqueur glasses; 2 glass jugs; 1 celery glass; 1 trifle dish; 8 dessert dishes.—China, 1 full dinner service; 1 common set for kitchen; 1 common tea service for kitchen; 1 good tea service; 1 breakfast service; 1 good dessert service.—The following is the list of Plate: 3 dozen of prongs; 2 dozen of table-spoons; 1 and a half ditto of dessert-spoons; 1 and a half ditto of dessert-forks; 2 ditto of tea-spoons; 6 salt-spoons; 1 cheese knife; 4 butter-knives; 1 asparagus-tongs, 2 sugar tongs; 1 soup-ladle; 4 sauce ladles; 2 gravy-spoons; 2 sugar-ladles; 2 salvers; 1 bread-basket; 4 candlesticks; 1 hot-water dish for haunch of mutton.

GENERAL POSTAL REGULATIONS, &c.

RATES OF POSTAGE.—All letters from one part of Great Britain to another (including the Local Penny Posts and the London Twopenny Post) are charged, if prepaid, and not

Exceeding half an ounce .. .. 1d.
Exceeding half an ounce, and not exceeding one ounce .. 2d.

and so on, at the rate of 2d. for every additional ounce or fraction of an ounce. Unpaid and unstamped letters are charged double postage on delivery.

HOURS OF POSTING FOR THE EVENING MAILS.—The Receiving-Houses close at 5 30 P.M.; but letters are received for the evening's dispatch until 6 P.M., if an extra penny stamp is affixed. The Branch Post-offices at Charing Cross, Old Cavendish-street, and Stones-end, Southwark, receive letters until 6 P.M., and until ½ to 7 P.M. by affixing an additional penny stamp. At the Branch Post-Office in Lombard-street, the box remains open without additional fee until 6 P.M., and until 7 P.M. by affixing a penny stamp At the General Post-Office in St. Martin's-le-Grand until 6, free; and until 7, by payment of the extra charge as at Lombard-street. From 7 to half-past 7 P.M., letters may be posted at the General Post-office upon payment of a fee of sixpence each, which must, as well as the postage, be pre-paid. Letters intended to pass by outward mails to foreign parts must be posted at the above hours.—N.B. Newspapers for the evening mails must be put into the Receiving-Houses before 5 P.M., the Branch offices before 5 30, or General Post Office before 6 P.M. From 6 P.M. to 7 30, on payment of one-halfpenny late fee; except newspapers for foreign parts, which must be posted at the General Post-Office and Branch Offices before 6 P.M., and at the Receiving-Houses before 5 P.M.

MORNING MAILS are forwarded to most of the principal towns in England and Wales, and to all parts of Ireland and Scotland, for which the letter-boxes at the Receiving-Houses will be open till 7 A.M. for newspapers, and ¼ to 8 A.M. for letters; and at the Branch Offices, Charing-cross, Old Cavendish-street, and the Borough, for newspapers until half-past 7 A.M., and for letters until 8 A.M. At the General Post-Office and the Branch Office in Lombard-street, the boxes will close for newspapers at a quarter before 8 A.M., and for letters at half-past 8 A.M.

Any SINGLE BOOK or PAMPHLET can now be sent through the Post-Office to any part of the United Kingdom if not exceeding 16 oz. in weight, and open at both ends, by affixing six postage stamps; if above 16 oz. 1s., and 6d. for every additional pound or fraction of a pound. The Postmaster-General does not guarantee the delivery of books and pamphlets with the same accuracy and regularity as newspapers and letters, but in no case will the delivery be delayed more than 24 hours after the usual post.

BRITISH AND COLONIAL PAPERS between British Colonies, without passing through the United Kingdom, to be free; except that 1d. may be allowed as a gratuity to the master of the vessel conveying them.

NEWSPAPERS, BRITISH, FOREIGN, OR COLONIAL, passing between British or Colonial and Foreign ports, and through the British post, to pay 2d.; if not through the British post, 1d.

NEW POSTAGE STAMPS intended principally for the pre-payment of foreign letters have been issued. They are of the value of one shilling each, the colour being green, and the form octagonal, and another of the value of tenpence of a brown colour. These stamps may be used for inland as well as foreign postage, but they are chiefly intended for the postage of letters to the United States, India, China, the West Indies, New South Wales, and New Zealand, &c

PACKAGES which in length, breadth, or width exceed twenty-four inches, cannot be forwarded by post between any places within the United Kingdom; except, however, petitions or addresses to her Majesty, or petitions to either House of Parliament forwarded to any Member of either House, or printed votes or proceedings of Parliament, or letters to or from any Government offices or departments.

MONEY ORDERS.—With a view to simplicity and economy in the accounts of the Money Order Office, it has been found necessary to lay down the following rules:—1. Every money order issued on or after the 6th October, 1848, must be presented for payment before the end of the second calendar month after that in which it was issued (for instance, if issued in October, it must be presented for payment before the end of December), otherwise a new order will be necessary, for which a second commission must be paid. 2. As already notified to the public, if an order be not presented for payment before the end of the twelfth calendar month after that in which it was issued (for instance, if issued in October and not presented before the end of the next October), the money will not be paid at all. 3. As, after once paying a money order, by whomsoever presented, the office will not be liable to any further claim, the public are strictly cautioned *a.* To take all means to prevent the loss of the money order. *b.* Never to send a money order in the same letter with the information required on payment thereof. *c.* To be careful, on taking out a money order, to state correctly the Christian name as well as the surname of the person in whose favour it is to be drawn. *d* To see that the name, address, and occupation of the person taking out the money order are correctly known to the person in whose favour it is drawn. 4. Neglect of these instructions will lead to delay and trouble in obtaining payment, and even risk the loss of the money. These instructions, together with some others of minor importance, will be found printed on every money order.

CONSULATE AND PASSPORT OFFICES.

AUSTRIA.—Embassy, 7, Chandos-street, Cavendish-square, between 12 and 2.

BELGIUM.—Legation, 9 A, Weymouth-street, Portland-place, between 11 and 3; delivered next day between 11 and 2, gratis; at the Consul's office, 3, Copthall-court, between 10 and 4—fee 5s.

BAVARIA.—The Minister, 3, Hill-street, Berkeley-square, when personally known to him; or at the Consul Office, 33½, Great St. Helen's.

BRAZIL.—Legation, 41, York-street, Portman-square, between 12 and 2, gratis.

DENMARK.—6, Warnford-court, between 10 and 4—fee 10s. 6d.; under special circumstances at the Embassy, 2, Wilton-terrace, Belgrave-square.

FRANCE.—French passport-office, 6, Poland-street, Oxford-street, from 12 to 5; delivered immediately on personal application, and payment of 5s; also at the Consul's office, 3, Copthall-buildings, between 12 and 4—fee 5s. One passport will include a whole family and servants.

NAPLES AND SICILY.—Passport-office, 15, Princes-street, Cavendish-square, Mondays and Thursdays, between 10 and 12; delivered following day between 2 and 3, gratis.

PORTUGAL.—Embassy, 57, Upper Seymour-street, Portman-square, between 11 and 4, delivered following day; also at Consul's office, 5, Jeffrey's-square, St. Mary-axe, from 10 to 4.

PRUSSIA.—106, Fenchurch-street, between 10 and 6—fee 7s.

RUSSIA.—2, Winchester-buildings, between 10 and 4; delivered following day—fee 6s. 4d.

THE QUEEN AND ROYAL FAMILY.

THE QUEEN.—VICTORIA, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, was born May 24th, 1819; succeeded to the throne, June 20th, 1837, on the death of her uncle, King William IV; crowned, June 28th, 1838, and married, February 10th, 1840, to his Royal Highness Prince Albert. Her Majesty is the only daughter of his late Royal Highness Edward Duke of Kent, son of King George III.

His Royal Highness Francis Albert Augustus Charles Emanuel Busiei, DUKE OF SAXE, PRINCE OF COBURG AND GOTHA, K.G., Consort of her Majesty, born August 26th, 1819.

Her Royal Highness Victoria Adelaide Mary Louisa, PRINCESS ROYAL, born November 21st, 1840.

His Royal Highness Albert Edward, PRINCE OF WALES, born November 9th, 1841.

Her Royal Highness Alice Maud, born April 25th, 1843.

His Royal Highness Alfred Ernest Albert, born August 6th, 1844.

Her Royal Highness Princess Helena Augusta Victoria, born May 25, 1846.

Her Royal Highness Princess Louisa Carolina Alberta, born March 18, 1848.

THE QUEEN DOWAGER.—Amelia Adelaide Louisa Theresa, sister to the reigning Duke of Saxe Meiningen, born August 13th, 1792; married July 11th, 1818; crowned September 8th, 1831.

Ernest Augustus, DUKE OF CUMBERLAND, in Great Britain, and KING OF HANOVER, uncle to her Majesty, born June 5th, 1771, married, August 29th, 1815. Issue, George Frederick.

Adolphus Frederick, DUKE OF CAMBRIDGE, uncle to her Majesty, born February 24th, 1774; married, May 2nd, 1818, her Serene Highness Augusta Wilhelmina Louisa, youngest daughter of Frederick, Landgrave of Hesse. Issue, three children.

MARY, Aunt to her Majesty, born April 25th, 1776; married, July 22nd, 1816, her cousin, the Duke of Gloucester, deceased.

Victoria Mary Louisa, DUCHESS OF KENT, born August 17th, 1786; married, in 1818, the Duke of Kent (who died January 23rd, 1820); her Majesty's mother.

Augusta Wilhelmina Louisa, DUCHESS OF CAMBRIDGE, niece of the Landgrave of Hesse, born July 25th, 1795; married, in 1818, the Duke of Cambridge, by whom she has issue, George William, Augusta Caroline, and Mary Adelaide.

George Frederick Alexander Charles Ernest Augustus, K.G., only child of the King of Hanover, Prince Royal of Hanover, cousin to her Majesty; born May 27th, 1819; married, February, 1843, Princess Mary of Saxe Altenberg, and has a son

George Frederick William Charles, K.G., son of the Duke of Cambridge, cousin to her Majesty, born March 26th, 1819.

Augusta Caroline Charlotte Elizabeth Mary Sophia Louisa, daughter of the Duke of Cambridge, and cousin to her Majesty, born July 19th, 1822; married, June 28th, 1843, Frederick, Hereditary Grand Duke of Mecklenburg Strelitz.

Mary Adelaide Wilhelmina Elizabeth, daughter of the Duke of Cambridge, and cousin to her Majesty, born November 27th, 1833.

THE QUEEN'S HOUSEHOLD.

Lord Great Chamberlain	Lord Willoughby D'Eresby
Lord Steward	Earl Fortescue
Lord Chamberlain	Marquis of Breadalbane, K.T.
Vice-Chamberlain	Lord E. Howard
Master of the Horse	Duke of Norfolk
Clerk Marshal and Chief Equerry	Lord Alfred Paget
Treasurer of the Household	Lord Marcus Hill
Comptroller of the Household	Right. Hon. W. S. Lascelles
Lord High Almoner	Bishop of Oxford
Sub-Almoner	Rev. G. Gondenough, D.D.
Clerk of the Closet	Bishop of Chester
Master of the Buckhounds	Earl of Bessborough
Comptroller of Accounts	Sir William Martins
Master of the Household	Major-General Bowles
Captain of the Yeomen of the Guard	Marquis of Donegal
Captain of Gentlemen-at-Arms	Lord Foley
Lords in Waiting	Earl of Listowel, Lord Camoys, Lord Waterpark, Lord Elphinstone, Earl of Morley, Lord Byron, Lord Dufferin, Marquis of Ormonde
Mistress of the Robes	The Duchess of Sutherland
Ladies of the Bedchamber	Countess of Mount-Edgecumbe, Marchioness of Douro, Countess of Desart, Countess of Gainsboro', Countess of Charlemont, Viscountess Jocelyn, Viscountess Canning, Lady Portman
Extra Lady of the Bedchamber	Duchess of Norfolk.
Physicians	Charles Locock, M.D., Sir James Clark, Bart., and W. F. Chambers, M.D.
Surgeons	Sir B. Brodie, Bart., and R. Keate, Esq.

HER MAJESTY'S MINISTERS.

OF THE CABINET.

First Lord of the Treasury (Premier)	Lord John Russell
Lord Chancellor	Lord Cottenham
Lord President of the Council	The Marquis of Lansdowne
Lord Privy Seal	The Earl of Minto
Secretaries of State—Home	Sir George Grey, Bart.
Secretaries of State—Foreign	Lord Palmerston
Secretaries of State—Colonial	Earl Grey
Chancellor of the Exchequer	The Rt. Hon. Sir Charles Wood
President of the Board of Control	Sir J. C. Hobhouse
President of the Board of Trade	Rt. Hon. H Labouchere
First Lord of the Admiralty	The Right Hon. Sir F. Baring, Bart.
Chancellor of the Duchy of Lancaster	Lord Campbell
Chief Commissioner Woods and Forests	Earl of Carlisle
Postmaster-General	The Marquis of Clanricarde

IRELAND.

Lord Lieutenant	The Earl of Clarendon
Lord Chancellor	The Right Hon. M Brady
Chief Secretary	The Right Hon. Sir W. Somerville, Bart.
Attorney-General	Right Hon. J. M. Monahan.
Solicitor-General	J. Hatchell, Esq.

SCOTLAND.

Lord High Constable	The Earl of Errol
Lord Privy Seal	Viscount Melville
Lord Advocate	Right Hon. A. Rutherford

GOVERNMENT OFFICES AND OFFICERS.

TREASURY,
WHITEHALL.

LORDS COMMISSIONERS.

Lord J. Russell, Sir Chas. Wood, Bart, H. Rich, Esq., R. M. Bellow, Esq., W. G. Craig, Esq.
Secretaries, the Right Hon. W. G. Hayter, H. Tufnel, Esq.
Assistant Secretary, Sir C E. Trevelyan.
Principal Clerk, S. R. Leake, Esq.
Solicitor, G. Maule, Esq.

EXCHEQUER,
WHITEHALL-YARD.

Chancellor, the Right Hon. Sir Charles Wood, Bart.
Comptroller, Lord Monteagle
Assistant, A. Eden, Esq
Chief Clerk, F. F. Ottey, Esq.
Accountant, G. S. Frederick, Esq.

HOME OFFICE,
WHITEHALL.

Secretary of State, Sir George Grey, Bart.
Under-Secretaries, G. C. Lewis, Esq., H. Waddington, Esq.
Chief Clerk, H. J. Knyvett, Esq.
Private Secretary, H. Brand, Esq.

FOREIGN OFFICE,
DOWNING-STREET.

Secretary of State, Lord Palmerston
Under-Secretaries Lord Eddisbury, H. U. Addington, Esq.
Chief Clerk, G. L. Conyngham, Esq.
Private Secretary, the Hon. Spencer Ponsonby

COLONIAL OFFICE,
DOWNING STREET.

Secretary of State, Earl Grey
Under-Secretaries, B. Hawes, Esq., H. Merivale, Esq.
Assistant Secretary, T. F. Elliot, Esq.
Chief Clerk, Peter Smith, Esq.
Private Secretary, the Hon. H. C. Grey.

IRISH OFFICE,
18, GREAT QUEEN-STREET, WESTMINSTER.

Chief Secretary, the Right Hon. Sir W. M. Somerville, Bart.
Chief Clerk, George Trundle, Esq.
Assistant, Hon. S. D. Montague
Private Secretary, H. Meredyth, Esq.
Counsel, E. Batty, Esq.

BOARD OF TRADE,
WHITEHALL.

President, the Rt. Hon H. Labouchere
Vice-President, Earl Granville. The Archbishop of Canterbury, the Cabinet Ministers, and the Right Hon. C. Arbuthnot.
Secretaries, G. R. Porter, Esq., Sir Denis Le Marchant, Bart.
Secretaries, Assistants, F. Lock, Esq., H. Hobart, Esq.
Private Secretary to the President, T. Baring, Esq.
Assistant Legal Secretary, Stafford H. Northcote, Esq.

BOARD OF CONTROL,
CANNON-ROW, WESTMINSTER.

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Secretaries James Wilson, Esq., M.P., the Hon. John Elliot
Private Secretary, A. Hobhouse, Esq.
Solicitor, R. Groom, Esq.

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1 AND 2, SOMERSET-PLACE.

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President, the Right Hon. Mathew Talbot Baines.
Secretaries, George Nicholls, Esq., C.B., Lord Ebrington, M.P.
Assistant Secretaries, William Golden Lumley, Esq., Barrister-at-Law, and H. Fleming, Esq
Inspectors, Edward Gulson, Esq., W. H. Toovey Hawley, Esq., Richard Hall, Esq., Barrister-at-Law, Robert Weale, Esq., Sir J. James Walsham, Bart., Alfred Austin, Esq., Barrister-at-Law, G. G. Wandisford Pigott, Esq, J. T. Graves, Esq., Barrister-at-Law, Andrew Doyle, Esq., Barrister-at-Law, J. Manwaring, Esq., H. B. Farnall, Esq. E. Hurst, Esq., Viscount Courtney
Private Secretary to the President, Geo. Buller, Esq.
First Clerk, Mr. Francis Fletcher
Board Clerk and Accountant, Mr. Hugh Owen

ADMIRALTY,
WHITEHALL.

Lords Commissioners, Sir Francis Baring, Rear-Admiral Dundas, Capt. the Hon. F. Berkeley, Captain Lord John Hay, the Hon. Wm. Cowper, Captain Milne
Secretaries, John Parker, Esq., M.P., Capt. W. A. B. Hamilton, R.N.
Private Secretary, Capt. Charles Eden
Chief Clerk, J. H Hay, Esq.
Hydrographer, Admiral Sir F. Beaufort
Assistant, M. Walker, Esq.
Civil Architect, Colonel Irvine

CIVIL DEPARTMENT, SOMERSET HOUSE.

Inspector-General, Sir W Burnet
Director-General of Works, Col. Irvine
Storekeeper, Hon. R. Dundas
Surveyor, Sir B. Walker
Assistant Surveyor, — Edye, Esq.
Comptroller of Steam Department, Capt. A. Ellice
Chief Engineer J. T. Lloyd, Esq.
Chief Clerks, J. M. Boddy, J. C. Parkin, W. Leyburn, B. Fosset, Wm. Scamp, Esqs.
Accountant, J. T. Briggs, Esq.
Deputy Accountant, O'B Woolsey, Esq.
Victualling, J. Meek, Esq.

ROYAL OBSERVATORY,
GREENWICH.

Astronomer Royal, G. B. Airy, Esq., M.A., D.C.L., F.R.S., P.R.A.S., &c.
First Assistant, Rev. R Main, M.A., F.R.A.S.

ASTRONOMICAL DEPARTMENTS.

Circle Superintendent, J Henry, Esq.
Transit Superintendent, T. Ellis, Esq
Altitude and Azimuth, E. Dunkin, Esq., F.R.A.S.

MAGNETICAL AND METEOROLOGICA DEPARTMENT.

Superintendent, James Glaisher, Esq. F.R.S., F.R.A.S.

ROYAL HOSPITAL FOR SEAMEN,
GREENWICH.

Governor, Admiral Sir Charles Adam, K.C.B
Lieutenant-Governor, Rear-Admiral Sir James Alexander Gordon, K.C.B.
Captains, G. Moubray, T. Dickenson, T. L. P. Laugharne, W. Cuppage.
Commanders, C. Robinson, W. C. C. Dalyell, J. Corbyn, E. W. Garrett.
Lieutenants, F. Bedford, W. Rivers, M. Fitton, J. W. Rouse, D. O'Brien Casey, B. J. Loveless, J. Dornford, G. M. Monk.
Masters, F. Penrose, H. Smartley.
Chaplains, Rev. J. K. Goldney, Rev. E. Kitson
Medical Inspector of Hospitals, Sir John Liddell, M.D.
Deputy Medical Inspector of Hospitals, Alexander Nisbet, M.D.
Surgeon, James M'Ternau
Dispenser, J. Whitmarsh.
Assisting Dispenser, A. Yair.
Assistant Surgeons, R. F. Cullen, N Lyttelton, W. T. Domville, V. C. Clarke.

CIVIL DEPARTMENT.

Commissioners, the Earl of Granville (Paymaster-General), the Earl of Carlisle, R. Adm. Sir H. Hart, K.C.H., R. Adm. Sir W. O. Pell, G. Tierney, Esq.
Secretary, J. A. Lethbridge, Esq.

ROYAL HOSPITAL SCHOOLS,
GREENWICH.

Superintendent, Lieut. John W. Rouse
Chaplain, Rev. Geo. Fisher, M.A., F.R.S.
Head Master of the Nautical School, E. Riddle, Esq., F.R.A.S.
Head Master of Upper School, Rev. J. Hill.
Head Master of Lower School, E. Hughes, Esq.

WAR OFFICE,
WHITEHALL.

Secretary at War, Rt. Hon. Fox Maule
Deputy, L Sullivan, Esq.
Chief Examiner, R. C. Kirby, Esq.
First Clerk, J. Borrow, Esq.
Senior Clerks, J. Sandham, J. Crooms, W. Anderson, T. L. Mattnew, R. H. Stewart, A J Moorhead, J. P. Parsey, H. Kendrick, and E. Biddle, Esqrs.
Private Secretary, A. G. Carmichael, Esq.

PAYMASTER-GENERAL'S OFFICE,
WHITEHALL.

Paymaster-General, Earl Granville.
Assistant Paymaster-General, W. G. Anderson, Esq.
Chief Clerks, T. Morris, J. Perrior, and H. A. Harrison, Esqs.

COMMANDER-IN-CHIEF'S OFFICE
HORSE-GUARDS.

Commander-in-Chief, Duke of Wellington
Private Secretary, A. Greville, Esq.
Military Secretary, Lieut.-General Lord F. Somerset
Aides-de-Camp, Colonel Hon. C. Anson, Colonel, Marquis of Douro, Capt. Earl of March, Captain Marquis of Worcester
Assistants to Military Secretary, F. H. Lindsay, Esq., F. Fergusson, Esq

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HORSE-GUARDS.

Adjutant-General, Sir J. Macdonald
Deputy, Major-Gen. G. Brown
First Clerk, Richard Cannon, Esq.
Confidential Clerk, E. G. Syms, Esq.

QUARTER-MASTER GENERAL'S OFFICE,
HORSE-GUARDS.

Quarter-Master General, General Sir J. W. Gordon
Assistant, Colonel J. Freeth
Deputy, Major Enoch
First Clerk, T. Marsh, Esq.
Confidential Clerk, J. O'Neil, Esq.

LAW OFFICERS OF THE CROWN.

Attorney-General, Sir J. Jervis.
Solicitor-General, Sir J. Romilly.

ADMIRALTY COURT,
2, PAUL'S BAKEHOUSE-COURT, DOCTORS'-COMMONS.

Judge, Rt. Hon. S. Lushington, D.CL.
Dean of the Arches, the Right Hon. Sir Herbert Jenner Fust.
Registrar, H. B. Swabey, Esq.
Queen's Advocate, Sir J. Dodson, LL.D.
Admiralty Adv., J. Phillimore, D.CL.
Queen's Proctor, F. H. Dyke, Esq.
Admiralty Proctor, W. Townsend, Esq.

JUDGE ADVOCATE-GENERAL'S OFFICE,
35, GREAT GEORGE-ST., WESTMINSTER.

Judge Advocate-General, the Right Hon. Sir David Dundas, M.P.
Deputy, Francis Newman Rogers, Esq., Q.C.
Chief Clerk, William Henry Hughes, Esq.
Second Clerk, Jonathan Scollick, Esq.
Third Clerk, Robert Champneys Mundell, Esq.

BOARD OF ORDNANCE,
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Surveyor-General, Major-Gen. C.R. Fox.
Clerk, the Hon. G. Anson.
Storekeeper, Sir Thomas Hastings.
Secretary to the Master-General, Lord C. Paget.
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2, WHITEHALL-PLACE.

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Bushy Park, Queen Dowager.
Hyde Park, H.R.H. Duke of Cambridge.
St. James's Park, Duke of Cambridge.
Richmond Park, Duke of Cambridge.
Greenwich Park, the Earl of Aberdeen.
Hampton Court, Lady Bloomfield.
New Forest, Duke of Cambridge.
Whittlebury Forest, Duke of Grafton
Waltham Forest, Earl of Mornington.
Wychwood Forest, Lord Churchill.
Dean Forest, Earl of Carlisle.

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LITTLE TOWER-HILL.

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Deputy, J. M. Morrison, Esq.
Comptroller, W. H. Barton, Esq.
Chief Engraver, Wm. Wyon, Esq.
Assistant, Leonard Wyon, Esq.
Chief Medallist, B. Pistrucci, Esq.
Assayer, H. Bingley, Esq.

STATE PAPER OFFICE,
12, DUKE-STREET, WESTMINSTER.

Keeper, Right Hon. H. Hobhouse
Deputy, C. Lechmere, Esq.
Chief Clerk, R. Lemon, Esq.
Junior Clerk, T. Temple, Esq.

PRIVY SEAL,
28, ABINGDON-STREET, WESTMINSTER.

Lord Privy Seal, Earl of Minto
Private Secretary, Hon. C. J. B. Elliot
Chief Clerk, J. G. Donne, Esq.
(By Patent) R. Eden, Esq.
Keeper of Records, R. Eden, Esq.
Clerk, W. Goodwin, Esq.

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28, ABINGDON-STREET.

Keepers of the Signet, the Secretaries of State.
Chief Clerks, Rev. W. H. E. Bentinck, C. S. Grey, Esq.
Deputy, T. H. Plasket, Esq.
Keeper of the Records, H. W. Sanders, Esq

TITHE COMMISSION,
9, SOMERSET PLACE.

W. Blamire, Esq., T. W. Buller, Esq., Rev. Richard Jones, M.A.

REGISTRAR OF DESIGNS OFFICE,
4, SOMERSET-PLACE.

Registrar, Clement Johnson, Esq.
Assistant Registrar, Hon. E. C. Curzon
Chief Clerk, J. Hill Bowen, Esq.

COLONIAL LAND AND EMIGRATION COMMISSIONERS,
9 AND 15, PARK-STREET, WESTMINSTER.

T. W. Clinton Murdoch, Esq., Charles Alex Wood, Esq, Fredk. Rogers, Esq.
Secretary, S. Walcott, Esq.

CUSTOM HOUSE.

Chairman, Sir Thomas Fremantle.
Deputy, the Right Hon. G. R. Dawson.
Commissioners, H. Richmond, Esq., S. G. Lushington, Esq.,—T. P. Dickenson, Esq., F. Goulburn, Esq., C. C. Smith, Esq., Capt. Saurin, Hon. S. E. Spring Rice
Secretary, C. Scovell, Esq.
Assistant, W. Maclean, Esq.
Receiver-General, Sir. F. Doyle
Comptroller-General, W. Dickinson, Esq
Solicitor, J. G. Walford, Esq.
Surgeon, J. O. McWilliam, Esq., M.D.

INLAND REVENUE OFFICES.
EXCISE DEPARTMENT, BROAD STREET, CITY; STAMP AND TAX DEPARTMENT, SOMERSET HOUSE.

Chairman, John Wood, Esq.
Deputy Chairman, J. Thornton, Esq.
Commissioners, Hart Davis, Charles Powlett Rushworth, Thomas Harrison, Henry Frederick Stephenson, Charles John Herries, Alfred Montgomery, Charles Pressly, Esqrs.
Secretary, J. C. Freeling, Esq.
Assistant Secretary, T. Keogh, Esq.
Solicitor, Joseph Timm, Esq.
Assistant Solicitor, Hugh Tilsley, Esq.
Receiver-General, W. T. Thornton, Esq.
Comptroller of Legacy Duties, Charles Trevor, Esq.

METROPOLIS ROADS,
22, WHITEHALL-PLACE.

Secretary, J. L. Panter, Esq.
Surveyor-General, Sir Jas. M'Adam.
Accountant, V. C. Wright, Esq.
Inspector, H. Browse, Esq.
Solicitor, J. W. Lyon, Esq.

OFFICE OF METROPOLITAN BUILDINGS,
6, ADELPHI-TERRACE.

Registrar, A. Symonds, Esq.
Official Referees, W. Hosking, Esq., A. Paynter, Esq., J. Shaw, Esq.
Examiners, Philip Hardwicke Esq., J. Pennethorne, Esq., T. Cubitt, Esq.

GENERAL REGISTER OFFICE,
7 AND 8, SOMERSET-PLACE, SOMERSET HOUSE.

Reg.-General, George Graham, Esq.
Chief Clerk, Thomas Mann, Esq.
STATISTICAL DEPARTMENT.
Superintendent, William Farr, Esq.
RECORD DEPARTMENT.
First Clerk, Edward Edwards, Esq.
Assistant, William Owen, Esq
CORRESPONDENCE DEPARTMENT.
First Clerk, George Sowray, Esq.
ACCOUNTANT'S DEPARTMENT.
First Clerk, Charles Henry Anderson, Esq.

RAILWAY BOARD,
BOARD OF TRADE, WHITEHALL.

Commissioners, the Right Hon. H. Labouchere (President), Earl Granville, Right Hon. Sir E. Ryan.
Secretary, Capt. Harness, R.E.

CITY OFFICERS.

LORD MAYOR.
Elected September 29th—Sworn in November 9th.
The Right Honourable THOMAS FARNCOMB, Bassishaw.

SHERIFFS.
Elected 24th June—Sworn in 28th September.
Wm. Lawrence, Esq., Alderman. | Donald Nicoll, Esq.

UNDER-SHERIFFS.
J. J. Millard, Esq. | D. W. Wire, Esq.

ALDERMEN.

	When chosen Aldermen.
THE FOLLOWING HAVE NOT PASSED THE CHAIR.	
Musgrove, John, Esq., Broad-street; 18, Old Broad-street ..	.. 1842
Hunter, William, Esq., Coleman-street; 10, Finsbury Circus ..	.. 1843
Challis, Thomas, Esq., Cripplegate; 32, Wilson-street, Finsbury	.. 1843
Sidney, Thomas, Esq, M.P., Billingsgate; 8, Ludgate-hill ..	.. 1844
Moon, F. G., Esq., Portsoken; 20, Threadneedle-street ..	.. 1844
Salomons, David, Esq., Cordwainer; 1, Shorter's-court ..	.. 1848
Finnis, Thomas Quested, Esq, Tower; Tower-street ..	.. 1848
Lawrence, William, Esq., Bread-street, 30, Bread-street ..	.. 1848
Carden, William, Esq., Dowgate; 2, Exchange Buildings ..	.. 1849
THE FOLLOWING HAVE PASSED THE CHAIR.	
Hunter, Sir. C. S., Bart., Bridge Without; 23, Euston-square ..	.. 1804
Thompson, W., Esq., M.P., Cheap; Upper Thames-street ..	.. 1821
Key, Sir John. Bart., Langbourn, 3, Abchurch Lane ..	.. 1823
Laurie, Sir Peter, Knt., Aldersgate; 7, Park-square, Regent's-park	.. 1826
Farebrother, C., Esq., Lime-street; 6, Lancaster-place, Strand	.. 1826
Copeland, W. Esq., M.P., Bishopsgate; 37, Lincoln's Inn-fields	.. 1829
Kelly, T., Esq., Farringdon Within; 17, Paternoster-row ..	.. 1830
Wilson, Samuel, Esq., Castle Baynard; 24, St. Paul's Church-yard	.. 1831
Marshall, Sir C., Knt., Bridge Within; 43, Russell-square ..	.. 1832
Pirie, Sir John, Bart., Coruhill; Birchin Lane	.. 1834
Humphery, J., Esq., M.P, Aldgate; Hays's Wharf, Southwark	.. 1835
Magnay, Sir William, Bart., Vintry; College-hill	.. 1838
Gibbs, Michael, Esq., Walbrook; 33, Walbrook	.. 1838
Carroll, Sir George, Candlewick, 34, Caveudish-square ..	.. 1840
John K. Hooper, Esq, Queenhithe	.. 1840
Sir James Duke, M.P., Farringdon Without	.. 1840

EAST INDIA COMPANY.

Six Directors are elected annually in April, when six go out by rotation. Each Director serves four years. The figure prefixed denotes the number of years each has to serve.

DIRECTORS.

(2) CHAIRMAN—Major-General Sir Archibald Galloway, K.C.B., 18, Upper Harley-street.

(3) DEPUTY CHAIRMAN—John Shepherd, Esq., Holly Lodge, Walton-on-Thames

(4) Sir Robert Campbell, Bart.	(3) Francis Warden, Esq.
(1) John Loch, Esq.	(4) Sir Henry Willock, K.L.S.
(1) Charles Mills, Esq.	(4) Sir James Weir Hogg, Bart., M.P.
(2) John Masterman, Esq., M.P.	(1) W. H. Chicheley Plowden, Esq., M.P.
(1) Henry St. George Tucker, Esq.	(4) Lieut.-Col. William Henry Sykes.
(3) Henry Alexander, Esq.	(3) Major James Oliphant
(1) Henry Shank, Esq.	(4) John Clarmont Whiteman, Esq.
(2) Russell Ellice, Esq.	(3) Hon. Wm. Henry Leslie Melville.
(2) Sir Richard Jenkins, G.C.B.	(2) Ross Donelly Mangles, Esq., M.P.
(1) John Cotton, Esq.	(3) Major-Gen. James Caulfield, C.B.
(2) William Butterworth Bayley, Esq.	(4) William Joseph Eastwick, Esq.

THE FOLLOWING GENTLEMEN ARE OUT BY ROTATION.

Lieutenant-General Sir James Law Lushington, G.C.B.	John Petty Muspratt, Esq.
George Lyall, Esq,	Martin Tucker Smith, Esq., M.P.
Elliot Macnaghten, Esq.	William Wigram, Esq.

BANK OF ENGLAND.

GOVERNOR—H. J. Prescott Esq.—DEPUTY GOVERNOR—Thos. Hankey, Jun., Esq.

DIRECTORS.

Thomas Baring, Esq.	Alexander Matheson, Esq.
Henry Wollaston Blake, Esq.	James Morris, Esq.
Henry Hulse Berens, Esq.	Sheffield Neave, Esq.
Arthur Edward Campbell, Esq.	George Warde Norman, Esq.
William Cotton, Esq.	John Horsley Palmer, Esq.
Bonamy Dobree, Esq.	John Oliver Hanson, Esq.
Charles Pascoe Grenfell, Esq.	Sir John Henry Pelly, Bart.
John Benjamin Heath, Esq.	Thomas Charles Smith, Esq.
John Gellibrand Hubbard, Esq.	William Thompson, Esq., Alderman.
George Lyall, Junior, Esq.	Thomas Tooke, Junior, Esq.
James Malcolmson, Esq.	Thomas Matthias Weguelin, Esq.
Thomas Masterman, Esq.	Francis Wilson, Esq.

LAW COURTS.

CHANCERY.—Lord High Chancellor, Lord Cottenham. Master of the Rolls, Lord Langdale. Vice Chancellor of England, Sir L. Shadwell. First Vice-Chancellor, Sir James L. K. Bruce; Second ditto, Sir James Wigram.

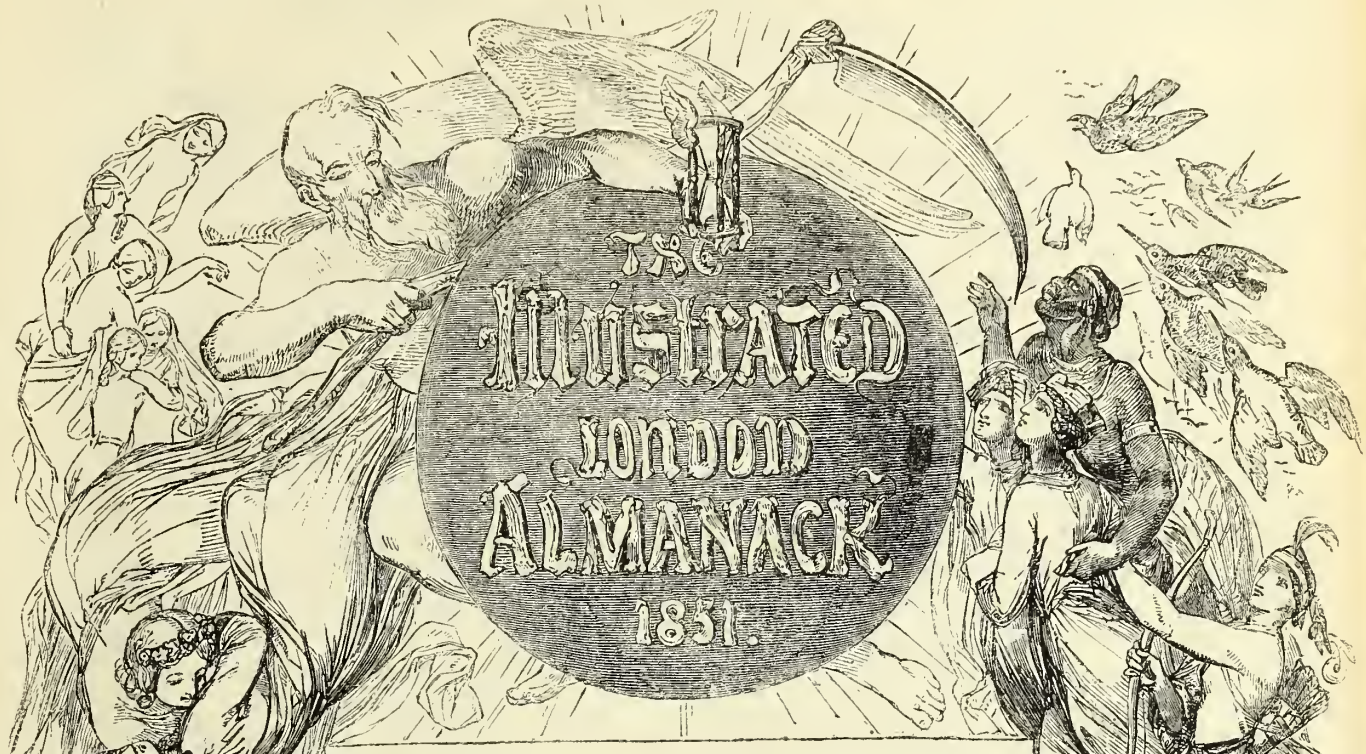
QUEEN'S BENCH.—Lord Chief Justice, Lord Denman. Judges, Sir John Patteson, Sir John T. Coleridge, Sir Wm. Wightman, Sir Wm. Erle.

COMMON PLEAS.—Lord Chief Justice, Sir Thos. Wilde. Judges, Sir Wm. Hen. Maule, Sir C. Cresswell, Sir Edw Vaughan Williams, Sir Thos. N. Talfourd.

EXCHEQUER.—Lord Chief Baron, Sir Frederick Pollock. Barons, Sir James Park, Sir Edw. H. Alderson, Sir Robert M. Rolfe, Sir Thomas J. Platt.

COURT OF BANKRUPTCY.

Birmingham, John Balguy, Q.C., Esq., and Edmund Robert Daniell, Esq.
Liverpool, Ebenezer Ludlow, Esq., Sergeant, and H. J. Perry, Esq.
Manchester, Walter Skirrow, Esq., and Wm. Thos. Jemmett, Esq.
Leeds, Martin John West, Esq., and W. S. Ayrton, Esq.
Bristol, H. J. Stephen, Esq., Serjeant, and Richard Stevenson, Esq.
Exeter, Montague Baker Bere, Esq.,
Newcastle, N. Ellison, Esq.



LONDON:

PUBLISHED AT THE OFFICE OF THE ILLUSTRATED LONDON NEWS,

198, STRAND.

INTRODUCTION.

THE Volume of the ILLUSTRATED LONDON ALMANACK which is now offered to the Public, is the Seventh from the commencement of the publication; and, it is hoped, will meet with as favourable a reception as those which have preceded it.

In the formation of this Almanack, attention has been paid not to reprint information which is common to several years, and which has been published in the series; and although every Volumo is complete in itself for the year of its publication, yet it must he considered as forming hut one of a series: therefore, the explanation of terms, aud information generally, which does not particularly belong to that year, may be found in the Volumes for other years.

CALENDAR AND SCIENCE.—The Calendarial and all relating to Science, in this, as well as in the five preceding Volumes, are from the pen of JAMES GLAISHER, Esq., F.R.S., F.R.A.S., and Secretary of the British Meteorological Society.

CALENDAR PAGES.—The arrangements of the Calendar pages remain as in the preceding Almanacks, without alteration.

ECLIPSE OF THE SUN.—On July 28 there will he a fine eclipse of the Sun; its successive phases will be found on page 29.

The ILLUSTRATIONS heading the Calendars—the Portraits of the Sovereigns of Europe—are from the pencil of M. BAUGNIET, and were engraved hy E. DALZIEL, Esq. The Title-page and Wrapper and the Drawings surrounding the Portraits were designed by W. HARVEY, ESQ.

The Illustrations on the third and fourth pages of each Month are from the pencil of G. DODGSON, Esq. The whole of the matter in these pages is from the ahle pen of THOMAS MILLER.

METEOROLOGICAL TABLES.—In preceding Almanacks the monthly values of several meteorological particulars have been given as found from the observations which have heen made at the Royal Observatory, Greenwich. In this will he found a table showing the average temperature in every quarterly period from the year 1771 to 1849. The numbers in this table have heen inferred from the observations which were made at the apartments of the Royal Society till the year 1840, and from those made at the Royal Observatory, Greenwich, from 1841.

METEOROLOGICAL INFORMATION.—At pages 52 to 55 will be found some interesting particulars of every year from 1771 to 1849; and also a diagram, which exhibits to the eye the excess or defect in warmth of every spring, summer, autumn, winter, and year; and a second diagram showing the temperature of every year, with a curve of change of temperature from year to year, as found from all the observations.

The importance of Statistical Knowledge is now generally acknowledged; and valuable as the Meteorological Tables are, which we have published, still they are for one place alone, whilst the particulars of every place are different in different parallels. In our own country, much has heen done to advance Meteorology within the last few years; but it has heen principally hy the labours of an individual only. We cannot but hope, that, as a Society has recently been formed, called the British Meteorological Society, under the Presidency of S. C. Whitbread, Esq., attention will in future be paid to it in accordance with its importance.

USEFUL TABLES.—The Useful Tables in the remaining portion of our Almanack are corrected to the latest moment before going to press.

THE MEAN TEMPERATURE OF THE AIR IN EVERY QUARTERLY PERIOD AND YEAR AT THE ROYAL OBSERVATORY, AT GREENWICH, WITH THE YEARLY AVERAGE PRICE OF WHEAT PER QUARTER, FROM THE YEAR 1771 TO THE YEAR 1849.

Year.	Jan., Feb., March.	Group of Years.	April, May, June.	Group of Years.	July, Aug., Sept.	Group of Years.	Oct., Nov., Dec.	Group of Years.	For the Year.	Average Price of Wheat per Quarter.	Group of Years.	Average Price of Wheat per Quarter.
	°	°	°	°	°	°	°	°	°	£ s. d.	°	£ s. d.
1771	32.7		49.1		56.6		43.2		45.4	2 7 2		
1772	35.0		50.1		58.2		45.1		47.1	2 10 8		
1773	37.6		49 1		57.7		41 9		46.6	2 11 0		
1774	37.4		52 7		58.9		41.7		47.7	2 12 8		
1775	41 3		55 5	52.0	60.7	59.6	42.6	43.6	50.0	2 8 4	48.2	2 5 5½
1776	36 9	37.6	52.2		59.3		44 8		48.3	1 18 2		
1777	38 1		50.9		60.2		43 6		48.2	2 5 6		
1778	36 8		51.3		61.3		44.5		49.2	2 2 0		
1779	42.4		54.5		63.2		44.7		51.2	1 13 8		
1780	37.7		52.9		62.7		42 0		48.8	1 15 8		
1781	39 7		53.9		61 7		43.7		49.8	2 4 8		
1782	37 3		50.9		57.1		38.7		45 5	2 7 10		
1783	37.9		51.5		60.3		42 2		48 0	2 12 8		
1784	32 4		51 7		57 7		38 5		45 1	2 8 10		
1785	33 5	36.8	52 7	52.0	58.8	59.0	40 8	41.0	46.5	2 1 10	47.2	2 4 9½
1786	35 4		52 2		56 4		39.1		45 8	1 18 10		
1787	39.7		51.2		59.0		42.6		48.1	2 1 2		
1788	38 2		54.8		58 8		39 6		47.9	2 5 0		
1789	35.9		50.7		57.9		42.4		46.7	2 11 2		
1790	41.0		50.1		57 6		43 5		48.1	2 13 2		
1791	40.2		51.9		59.2		40.9		48.1	1 19 6		
1792	38.1		51.0		58.7		44 0		48.0	2 3 2		
1793	38.1		49.5		58 9		45 3		47.9	2 6 0		
1794	40.8		52 6		59 5		42 8		48.9	2 10 0		
1795	32.2	38.3	50.2	51.1	60.2	58.9	46.3	42.7	47.2	3 15 5	47.8	2 17 3¾
1796	41.3		51.5		59.2		39.1		47.8	3 17 0		
1797	36.3		50.8		59.0		43.2		47.2	2 14 10		
1798	33.8		54.7		59.7		41.2		48.6	2 4 0		
1799	35.6		48.9		57.2		41.0		45.7	4 10 0		
1800	36.2		52.5		61.6		42.8		48.3	6 10 0		
1801	40.7		52.5		60.6		42.4		49.0	5 15 11		
1802	37.7		52.1		59.4		42.6		48.0	3 7 9		
1803	37.3		51.4		59.3		44.7		48.2	2 17 1		
1804	40.4		53.9		59.8		43.7		49.5	3 0 5		
1805	38.4	38.7	49.9	52.1	60.0	60.0	42.3	43.5	47.7	4 7 1	48.5	4 0 1¾
1806	40.9		52.6		59.9		43.5		50.5	3 16 9		
1807	37.9		52.6		60.1		42.8		48.3	3 13 1		
1808	36.8		52.5		61.2		42.0		48.1	1 18 11		
1809	40.7		51.4		58.2		43.4		48.0	4 14 5		

Year.	Jan., Feb., March.	Group of Years.	April, May, June.	Group of Years.	July, Aug., Sept.	Group of Years	Oct., Nov., Dec.	Group of Years.	For the Year	Average Price of Wheat per Quarter.	Group of Years.	Average Price of Wheat per Quarter.
	°	°	°	°	°	°	°	°	°	£ s. d.	°	£ s. d.
1810	38.4		51.5		60.3		44.4		48.7	5 3 3		
1811	38.8		54.2		59.1		46.4		49.6	4 12 5		
1812	38.6		48 9		56 8		41.5		46 5	6 2 8		
1813	39.7		50.5		57 2		41.4		47.2	5 6 6		
1814	32.0		50.0		58.2		43.0		45.8	3 12 1		
1815	39.4	38.5	53 1	51.3	60.9	59.1	42.4	43.3	49 0	3 3 8	48.1	4 8 8
1816	37.5		48.4		57.1		42 6		46.4	3 16 2		
1817	41.1		50.3		56.2		43.0		47.7	4 14 0		
1818	38.7		53.7		63.5		47.2		50.8	4 3 8		
1819	41 4		52.9		61.2		41.8		49.3	3 12 3		
1820	36.6		52.5		57.5		42 8		47.4	3 5 10		
1821	38.8		51.3		59.7		47 4		49 3	2 14 5		
1822	43.5		55.0		59 9		45.5		51.0	2 3 3		
1823	36.6		50.9		58.1		43.5		47.3	2 11 9		
1824	37.7	38.4	49.4	52.5	60.1	59.6	45.9	44.7	48.3	3 2 0	48.8	2 18 4¼
1825	38.3		53 7		62.3		44 2		49 6	3 6 6		
1826	39.1		54.0		61.8		44 7		49.9	2 16 11		
1827	36.0		52 4		59 8		45.8		48 5	2 16 2		
1828	41.2		53.6		59.5		46.2		50.1	3 0 5		
1829	36.4		52.4		57.0		40.6		46.6	3 6 4		
1830	36 9		52 8		58 2		43 4		47.8	3 4 3		
1831	39.8		53.4		61.3		47.1		50 4	3 6 8		
1832	38.2		52.6		59.6		45.8		49.1	2 18 8		
1833	38.2		54.8		57.4		45.5		49.0	2 13 5		
1834	42 9	38.6	54 3	52.1	61.6	59.3	45.2	44.4	51.0	2 4 8	48.6	2 16 8
1835	40.1		53.1		61.6		42.0		49.2	1 19 4		
1836	39.3		51.7		58 4		42.8		48 1	2 8 6		
1837	37.8		48.3		58.8		44.3		47.3	2 15 10		
1838	34.4		49.8		58 2		43.1		46.4	3 4 7		
1839	38.4		49 8		58.2		44.4		47.7	3 10 8		
1840	38.2		53 6		58.1		41.2		47.8	3 6 4		
1841	38.4		53 5		58.8		44.0		48 7	3 4 4		
1842	39.5		53.8		60 7		44.4		49.6	2 17 3		
1843	39.6		51.9		60 8		45.2		49.4	2 10 1		
1844	38.6		55.1		58.7		42.2		48.7	2 10 1		
1845	35.4	39.3	52.1	53.6	56.9	59.7	45 9	44.4	47.6	2 10 10	49.2	2 15 9¾
1846	43.6		55.7		62 6		43.1		51 3	2 14 8		
1847	37.2		53.2		60.6		47.5		49.6	3 9 9		
1848	40.6		55 3		58.6		46 5		50.2	2 10 6		
1849	41.9		51.7		61.3		44.8		49 9	2 4 2		

Note.—In reading this table, it will be borne in mind that the number following the point indicates the number of tenth-parts of one degree; thus, 32°.7 is read thirty-two degrees and seven-tenths of another degree.

ON THE CALENDAR.

PRINCIPAL ARTICLES OF THE CALENDAR, FOR THE YEAR OF OUR LORD 1851.

	Gregorian, or New Calendar	Julian, or Old Calendar.
Dominical Letter	E	G
Golden Number	9	9
Roman Indiction	9	9
Solar Cycle	12	12
Epact	28	9

(For remarks upon these articles, see the Almanack for the year 1847.)

CORRESPONDENCE OF THE YEAR 1851 WITH ANCIENT ERAS.

The year 1851, till September 26, is the latter part of the 5611th, and from September 27, is the commencement of the 5612th, year since the creation of the world according to the Jews.

The year 1851 is the 6564th of the Julian Period.

The year 1851 is the 2604th year from the foundation of Rome (according to Varro).

The year 1851 is the 2598th year since the era of Nabonasser, which has been assigned to Wednesday, the 26th of February, of the 3967th year of the Julian Period, which corresponds, accordlog to chronologists, to the 747th, and, accord-ing to astronomers, to the 746th year before the birth of Christ.

The year 1851 is the 2627th year of the Olympiads; or the third year of the 637th Olympiad will begin in July, 1851, if we fix the era of the Olympiads at 775½ years before Christ, or at or about the beginning of July of the year 3938 of the Julian Period.

The year 1851 is the latter part of the 1267th, and the first part of the 1268th year (of twelve lunations) since the Hegira, or flight of Mahomet, which it is generally supposed took place on the 18th of July, in the year 622 of the Chris-tian era. The year 1267 commenced on the 6th of November, 1850, and ends on the 26th of October, 1851.

CALENDAR OF THE JEWS FOR THE YEAR 1851.

5611.	1850.	NEW MOONS AND FEASTS.
Tebeth .. 1	December .. 6	Rosh Hodesh, or New Moon.
„ .. 10	„ .. 15	Fast: Siege of Jerusalem.
	1851.	
Schebat .. 1	January .. 4	New Moon
Adar .. 1	February .. 3	New Moon
„ .. 14	„ .. 16	Little Purim
Veadar .. 1	March .. 5	New Moon
„ .. 13	„ .. 17	Fast: Esther
„ .. 14	„ .. 18	Purim
„ .. 15	„ .. 19	Schuschan Purim
Nisan .. 1	April .. 3	New Moon
„ .. 15	„ .. 17	Passover begins*
„ .. 16	„ .. 18	Second day*
„ .. 21	„ .. 23	Seventh day*
„ .. 22	„ .. 24	Passover ends*
Ijar .. 1	May .. 3	New Moon
„ .. 18	„ .. 20	Lag Beomer
Sivan .. 1	June .. 1	New Moon
„ .. 6	„ .. 6	Pentecost Holidays: Feast of Weeks*
„ .. 7	„ .. 7	Second day*
Tamuz .. 1	July .. 1	New Moon
„ .. 17	„ .. 17	Fast: Seizure of the Temple by Titus
Ab .. 1	„ .. 30	New Moon
„ .. 9	August .. 7	Fast: Destruction of the Temple
Elul .. 1	„ .. 29	New Moon
„ .. 7	September .. 4	Consecration of the Walls of Jerusalem
„ .. 17	„ .. 14	Expulsion of the Greeks
5612.		
Tisri .. 1	„ .. 27	Feast of the New Year*
„ .. 2	„ .. 28	Second days*
„ .. 3	„ .. 29	Fast: Death of Edaliah
„ .. 10	October .. 6	Fast: Day of Atonement*
„ .. 15	„ .. 11	Feast of Tabernacles*
„ .. 16	„ .. 12	Second Day of the Feast*
„ .. 21	„ .. 17	Feast of Branches
„ .. 22	„ .. 18	End of the Feast of Tabernacles*
„ .. 23	„ .. 19	Feast of the Law*
Marchesvan 1	„ .. 27	New Moon
„ .. 6	November .. 1	Fast for the Destruction of Jerusalem
Kislev .. 1	„ .. 25	New Moon
„ .. 25	December .. 19	Feast of the Dedication of the Temple
Tebeth .. 1	„ .. 24	New Moon

The Anniversaries marked with an asterisk (*) are to be strictly observed.

The Jewish Year generally contains 354 days, or 12 Lunations of the Moon; but, in a cycle of 19 years, an intercalary month (Veadar) is 7 times introduced, for the purpose of rendering the average duration of the year nearly correct.

MOHAMMEDAN CALENDAR FOR THE YEAR 1851.

Year.	Names of the Months.	Month begins.
Hegiri; 1267.	Safar	December 6, 1850.
„ „	Rebia I	January 4, 1851.
„ „	Rebia II	February 3, „
„ „	Gomedhi I	March 4, „
„ „	Gomedhi II	April 3, „
„ „	Rejeb	May 2, „
„ „	Scheban	June 1, „
„ „	Ramedan (Month of Fasting) ..	June 30, „
„ „	Schewale (Bairam) ..	July 30, „
„ „	Dsu'l-Kadah	August 28, „
„ „	Dsu'l-hejjah	September 27, „
Hegiri; 1268.	Moharrem 1	October 27, „
„ „	Safar 1	November 26, „
„ „	Rebia	December 25, „

(For remarks on the Mohammedan year, see the Almanack for the year 1848.)

BEGINNING OF THE SEASONS, 1851.

			D.	H.	M.	
The Sun enters	Capricornus	(Winter begins)	1850, Dec. 22	3	38	A.M.
„	Aries	(Spring begins)	1851, March 21	4	55	A.M.
„	Cancer	(Summer begins)	„ June 22	1	41	A.M.
„	Libra	(Autumn begins)	„ Sept. 23	3	51	P.M.
„	Capricornus	(Winter begins)	„ Dec. 22	9	29	A.M.

FIXED AND MOVEABLE FESTIVALS, ANNIVERSARIES, &c.

Epiphany	Jan.	6	*Ascension Day—Holy Thursday*	May	29
Martyrdom of King Charles I.	„	30	Restoration of King Chas. II.	„	29
Septuagesima Sunday ..	Feb.	16	*Pentecost—Whit Sunday* ..	June	8
St. David	March	1	*Trinity Sunday*	„	15
Quinquagesima—Shrove Sun.	„	2	*Corpus Christi*	„	19
Ash Wednesday	„	5	Accession of Queen Victoria	„	26
Quadragesima—1st Sunday in Lent	„	9	Proclamation	„	21
St. Patrick	„	17	St. John Baptist—Midsummer Day	„	24
Annunciation—Lady Day	„	25	St. Michael—Michaelmas Day	Sep.	29
Palm Sunday	April	13	Gunpowder Plot	Nov.	5
Good Friday	„	18	Birth of Prince of Wales ..	„	9
EASTER SUNDAY	„	20	St. Andrew	„	30
St. George	„	23	*1st Sunday in Advent* ..	„	30
Low Sunday	„	27	St. Thomas	Dec.	21
Birth of Queen Victoria ..	May	24	Christmas Day	„	25
Rogation Sunday	„	25			

DURATION OF THE SEASONS, AND THE YEAR 1851.

The Sun will be in the	Winter	signs	89 Days	1 Hour	17 Minutes
„	Spring	„	92 „	20 „	46 „
„	Summer	„	93 „	14 „	10 „
„	Autumn	„	89 „	17 „	38 „

So that the period of Summer is 4 days, 12 hours, and 53 minutes longer than that of Winter; 17 hours and 24 minutes longer than that of Spring; and 3 days, 20 hours, and 32 minutes longer than that of Autumn.

		D.	H.	M.		°	′	″
The Sun will be on the Equator and going N.	1851, March 21	4	55	P.M., his declin. being	0	0	0
The Sun will reach his extreme N. declinat.	1851, June 22	1	41	A.M., his declin. being	23	27	25
The Sun will be on the Eqnator, and going S.	1851, Sept. 23	3	51	P.M., his declin. being	0	0	0
The Sun will be at his extreme S. declination	1851, Dec. 22	9	29	A.M., his declin. being	23	27	25

The Sun will be North of the Eqnator (Spring and Summer) 186 days 10 hours 56 minutes.

The Sun will be South of the Equator (Winter and Autumn) 178 days 18 hours 55 minutes.

The length of the Tropical Year, commencing at the Winter Solstice 1850, and ending at the Winter Solstice 1851, is 365 days 5 hours 51 minutes.

ASTRONOMICAL SYMBOLS AND ABBREVIATIONS.

☉ The Sun	☆ Astrea	° Degrees
● New Moon	⚘ Flora	′ Minutes of Arc
☽ First Quarter of Moon	☿ Metis	″ Seconds of Arc
○ Full Moon	Parthenope	D. Days
☾ Last Quarter of Moon	⚵ Victoria	H. Hours
☿ Mercury	♃ Jupiter	M. Minutes of Time
♀ Venus	♄ Saturn	S. Seconds of Time
⊕ or ♁ The Earth	♅ Uranus	☉ Sunday
♂ Mars	♆ Neptuno	☽ Monday
⚶ Vesta	☊ Ascending Node	♂ Tuesday
⚳ Juno	☋ Descending Node	☿ Wednesday
⚴ Pallas	N. North	♃ Thursday
⚳ Ceres	E. East	♀ Friday
⚲ Hebe	S. South	♄ Saturday
⚢ Iris	W. West	

The Symbol ☌ Conjunction, or having the same Longitude or Right Ascension
„ □ Quadrature, or differing 90° in Longitude or Right Ascension.
„ ☍ Opposition, or differing 180° in Longitude or Right Ascension.

(For explanation of Astronomical terms, see Almanack for the year 1848.)

SIGNS OF THE ZODIAC.

Spring Signs	1 ♈ Aries	Autumn Signs	7 ♎ Libra
	2 ♉ Taurus		8 ♏ Scorpio
	3 ♊ Gemini		9 ♐ Sagittarius
Summer Signs	4 ♋ Cancer	Winter Signs	10 ♑ Capricornus
	5 ♌ Leo		11 ♒ Aquarius
	6 ♍ Virgo		12 ♓ Pisces

LAW TERMS, 1851.

As Settled by Statutes 2 George IV., 1 William IV., cap. 70, s. 6 (passed July 23rd, 1830), and 1 William IV., cap. 3, s. 2 (passed December 23rd, 1830).

Hilary Term	Begins January 11		Ends January	31
Easter Term	„ April	15	„ May	13
Trinity Term	„ May	27	„ June	17
Michaelmas Term	„ Nov.	2	„ Nov.	25

UNIVERSITY TERMS, 1851.

OXFORD.

TERM.	BEGINS.	ENDS.
Lent	January 14	April 12
Easter	April 30	June 7
Trinity	June 11	July 5
Michaelmas	October 10	December 17

The Act, July 1.

CAMBRIDGE.

TERM.	BEGINS.	DIVIDES.	ENDS.
Lent	Jan. 13	Feb. 26, Noon	April 11
Easter ..	April 30	June 1, Midnight	July 4
Michaelmas ..	Oct. 10	Nov. 12, Midnight	Dec. 16

The Commencement, July 1.

MILLARD FILLMORE, PRESIDENT OF AMERICA, BORN JANUARY 7, 1800; BECAME PRESIDENT JULY 10, 1850.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Afternoon	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	W	*Circumcision*	8 8	3 44	15½	4 0	7 0	11 16	18	3 30	29	1 10	1 35	1
2	Th	Length of day 7h 53m	8 8	4 13	15½	4 1	7 55	Afternoon	16¾	4 17	○	1 55	2 15	2
3	F	Alpha Andromedæ souths 5h 10m P.M., at an altitude of 66½°	8 8	4 41	15¾	4 2	8 43	0 56	17¼	5 12	1	2 35	2 55	3
4	S		8 8	5 8	15¾	4 3	9 21	1 44	19	6 11	2	3 15	3 35	4
5	S	2D S. aft. CHRIST	8 8	5 35	15¾	4 4	9 51	2 30	21¼	7 13	3	3 50	4 15	5
6	M	*Epiphany*	8 7	6 2	16	4 6	10 21	3 15	24⅛	8 16	4	4 25	4 40	6
7	Tu	Polaris on the Meridian at 5h 58m P.M.	8 7	6 29	16	4 7	10 44	3 58	28¼	9 21	5	4 55	5 15	7
8	W	*Lucian*	8 7	6 54	16¼	4 8	11 5	4 40	32½	10 25	6	5 35	5 50	8
9	Th	Aldebaran souths 9h 11m P.M.	8 6	7 19	16¼	4 9	11 26	5 23	36¾	11 31	7	6 10	6 30	9
10	F	Length of night 15h 56m	8 6	7 44	16½	4 10	11 46	6 6	41¼	Morning.	☽	6 50	7 10	10
11	S	Hilary Term beg.	8 5	8 8	16¾	4 11	Afternoon	6 51	45¾	0 37	9	7 35	8 1	11
12	S	1ST S. aft EPIPH.	8 4	8 32	16¾	4 13	0 33	7 39	50	1 46	10	8 35	9 10	12
13	M	Plough Monday	8 3	8 55	17	4 14	1 0	8 30	53¾	2 58	11	9 45	10 20	13
14	Tu	Ox. Term begins	8 2	9 17	17¼	4 16	1 35	9 25	56¾	4 12	12	10 55	11 30	14
15	W	Capella souths 9h 26m P.M.	8 2	9 39	17½	4 18	2 18	10 24	58½	5 24	13	No Tide.	0 5	15
16	Th	Length of day 8h 18m	8 1	9 59	17½	4 19	3 14	11 26	58¾	6 34	14	0 30	0 55	16
17	F	Eclipse of Moon 4h 50m P.M.	8 0	10 20	17¾	4 21	4 22	Morning.	—	7 36	●	1 20	1 50	17
18	S	*Prisca.* Old T.D.	7 59	10 39	18	4 22	5 40	0 29	57½	8 27	16	2 10	2 35	18
19	S	2D S. aft EPIPH.	7 58	10 58	18¼	4 24	7 1	1 31	54⅓	9 9	17	3 0	3 25	19
20	M	*Fabian*	7 57	11 16	18¼	4 25	8 24	2 29	50½	9 43	18	3 50	4 10	20
21	Tu	*Agnes*	7 56	11 33	18⅓	4 27	9 46	3 25	45¾	10 11	19	4 35	5 0	21
22	W	*Vincent*	7 55	11 49	18¾	4 29	11 4	4 17	40½	10 35	20	5 25	5 50	22
23	Th	Pollux souths 11h 25m P.M.	7 54	12 5	19	4 31	Morning.	5 8	35¼	10 58	21	6 10	6 35	23
24	F	Length of night 15h 20m	7 53	12 20	19¼	4 33	0 20	5 57	30¼	11 23	☾	7 0	7 25	24
25	S	*Convers. St. Paul*	7 51	12 35	19½	4 35	1 32	6 45	26	11 47	23	7 50	8 20	25
26	S	3D S. aft EPIPH.	7 50	12 48	19¾	4 37	2 44	7 34	22¼	Afternoon	24	8 55	9 35	26
27	M	Castor souths 8h 58m P.M.	7 48	13 1	20	4 39	3 51	8 23	19⅕	0 50	25	10 5	10 45	27
28	Tu	Sirius souths 10h 8m P.M.	7 47	13 13	20¼	4 40	4 53	9 13	17¾	1 22	26	11 20	11 40	28
29	W	Procyon souths 10h 57m P.M.	7 45	13 24	20⅕	4 41	5 49	10 2	17	2 14	27	No Tide.	0 30	29
30	Th	K. Chas. I. Mar.	7 44	13 34	20¾	4 43	6 38	10 51	17¼	3 6	28	0 55	1 25	30
31	F	Hilary Term ends	7 43	13 43	21	4 45	7 20	11 39	18½	4 4	29	1 45	2 5	31

DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h. After Sunset. O'Clock. 6h. 8h. 10h.

JANUARY.

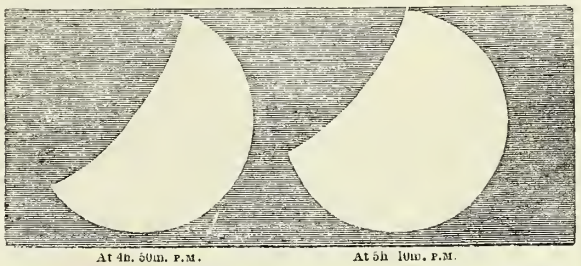
The Sun is situated south of the Equator, or he has south declination, and is in the sign Capricornus (the Goat) till the 20th, having been in that sign 29 days 10 hours 30 minutes. On this day, at 2h. 8m. P.M., he enters the sign Aquarius (the Water-bearer).

On the 1st day he is 93,412,000 miles from the earth. He rises on the 1st at a point situated 3° S. of the S.E. by E., and on the 16th at the S E. by E.; and he sets on the same days at 3° S. of the S.W. by W., and at the S.W. by W. points of the horizon.

The Moon is in the constellation Sagittarius till the 3rd, on which day she passes into Capricornus; on the 5th, into Aquarius; on the 7th, into Pisces; on the 10th, into Cetus; on the 11th, into Aries; on the 12th, into Taurus; on the 15th, into Gemini; on the 17th, into Cancer; on the 18th, into Leo; on the 21st, into Virgo; on the 24th, into Libra; on the 25th, into Scorpio; on the 26th, into Ophiuchus; on the 28th, into Sagittarius; and on the 31st, into Capricornus.

On the 17th there will be an eclipse of the Moon: it commences at 40m. after 3 in the afternoon; the middle of the eclipse will be at 10 minutes to 5; and it will end at 6 o'clock. By reference to the opposite page, the Moon rises at 4h. 22m., being 42 minutes after the beginning of the eclipse; she therefore rises partially eclipsed, and she will scarcely be seen, particularly in the western parts of the country, till about the middle of the eclipse. The annexed diagrams shew her appearance at this and subsequent times till near the end of the eclipse.

APPEARANCES OF THE MOON DURING HER ECLIPSE ON JANUARY 17, 1851.



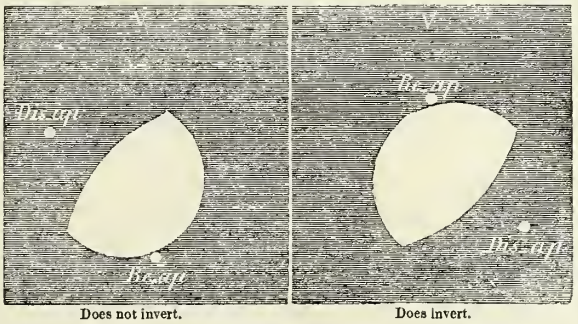
At 4h. 50m. P.M. At 5h 10m. P.M.

She is above the horizon when the Sun is below, during the morning hours, from the 13th to the 27th; and during the evening hours, from the 3rd to the 17th.

She is at her extreme south declination on the 2nd; on the Equator on the 9th; at her extreme north declination on the 16th; a second time on the Equator on the 22nd; and again at her extreme south declination on the 29th.

She is near Mars on the 1st; Mercury on the 4th; Saturn on the 10th; Uranus on the 11th; Aldebaran on the 20th; Jupiter on the 23rd; Venus on the 28th; and Mercury and Mars on the 30th.

OCCULTATION OF Xi 2 CETI, JANUARY 11, 1851, AS SEEN THROUGH A TELESCOPE WHICH



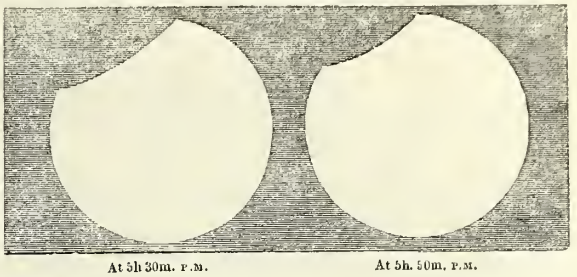
Does not invert. Does invert.

The star disappears at the dark limb of the Moon at 10h. 34m. P.M., and reappears at the bright limb at 11h. 34m. P.M.

Mercury is in the constellation Capricornus till the 24th; and on the 25th he enters Sagittarius.

He rises after the Sun till the 21st, and before the Sun from the 22nd. On the 28th he rises at 6h 47m., being one hour before sunrise, and on the last day he rises at 6h. 32m., being 1h. 11m. before the Sun.

APPEARANCES OF THE MOON DURING HER ECLIPSE ON JANUARY 17, 1851.



At 5h 30m. P.M. At 5h. 50m. P.M.

He sets after the Sun till the 23rd, at 5h. 25m. on the 1st; at 5h. 45m. on the 6th; at 5h. 50m. on the 9th; at 5h. 49m. on the 12th; at 5h. 40m. on the 15th; at 5h. 21m. on the 18th; and on the 21st, at 4h. 54m. Till the 18th day the times of setting exceed one hour after sunset; and between the 7th and 12th, the intervals of time are nearly 1¾ after sunset. He is therefore favourably situated for observation after sunset till the 18th, and before sunrise from the 28th. The best times are from the 3rd to the 15th, after sunset.

He rises midway between the E.S.E. and S.E. by E., and sets midway between the W.S.W. and S.W. by W. points of the horizon. He is moving eastward among the stars till the 12th, is almost stationary among them till the 14th, and then moves westward. He reaches his greatest eastern elongation on the 6th; is in Perihelion on the 13th, and is near the Moon on the 4th and 30th. For his path in the heavens see the diagram in next month; and by comparing his place in this diagram on January 30 with that of Mars as shewn in the diagram in March on the same day, it will be seen that their position with respect to Alpha Capricorni is nearly the same, and, therefore, that the planets are near together.

Venus is in the constellation Ophiuchus throughout the month.

She shines with great brilliancy as a morning star, and rises before the Sun on the 1st at 5h. 58m. A.M., and on the last day at 4h. 34m., midway between the E.S.E. and S.E. by E. points of the horizon. She is almost stationary among the stars at the beginning of the month, and moves eastward among them afterwards. She is in Perihelion on the 13th, and is near the Moon on the 28th. For her path in the heavens see the diagram in next month.

Mars is in the constellation Sagittarius throughout the month.

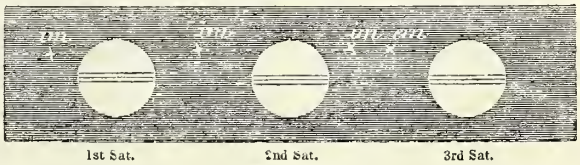
He rises and sets during the month a little before the Sun, and is unfavourably situated for observation. He is moving eastward among the stars, and is near the Moon on the 1st and the 30th. For his path in the heavens see the diagram in March.

Jupiter is in the constellation Virgo till the end of the month.

He is a morning star, and rises at the E. by S. point of the horizon, on the 1st day at 1h. 7m. A.M., and on the last day at 11h. 20m. P.M. He moves very slowly eastward among the stars, and is near the Moon on the 23rd. He souths at an altitude of 31½° on the 1st, and of 31° on the last day.

Jupiter's Satellites.—Several emersions of the first and second Satellites are visible. The relative position of the Satellites to Jupiter at the instant of the eclipse is shewn in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



1st Sat. 2nd Sat. 3rd Sat.

(*Continued on page* 13.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Morning.	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon	Neptune. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	1 23	10 24	11 24	6 38	6 14	3 46
6	1 28	10 3	11 21	6 20	5 58	3 27
11	1 21	9 46	11 18	6 2	5 36	3 8
16	0 57	9 33	11 15	5 44	5 17	2 49
21	0 17	9 22	11 12	5 26	4 58	2 29
26	Morning	9 14	11 8	5 7	4 40	2 10
31	10 58	9 9	11 5	4 48	4 21	1 52

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Immersion.				Eclipses of 2nd Sat. Immersion.			
D.	H.	M.		D.	H.	M.	
8	5	0	A.M.	11	2	1	A.M.
15	6	54	A.M.	18	4	31	A.M.
17	1	22	A.M.	25	7	7	A.M.
24	3	15	A.M.				
31	5	9	A.M.				

Eclipses of 3rd Sat.			
26	0	22	A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars	Magnitude.	Times of disappearance & re-appearance of the Star. D. H. M.	At which limb of the Moon.	Between what Latitudes visible.
Psi 1 Aquarii	5	7 6 4 P.M.	Dark	8° N. &
		7 7 14 P.M.	Bright	80° N.
Xi 2 Ceti	4	11 10 34 P.M.	Dark	1° N &
		11 11 34 P.M.	Bright	84° N.
Chi 3 Orionis	5	15 5 38 P.M.	Dark	13° N. &
		15 6 35 P.M.	Bright	80° N.
68 Orionis	6	15 9 50 P.M.	Dark	15° N. &
		15 10 49 P.M.	Bright	82° N.
d Cancri	6	17 11 10 P.M.	Bright	14° N. &
		18 0 13 A.M.	Bright	87° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

New Moon ..	2d.	10h.	44m.	A.M.
First Quarter	10	4	21	P.M.
Full Moon ..	17	4	42	A.M.
Last Quarter	24	8	17	A.M.
Apogee	6	4		A.M.
Perigee	18	2		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination South.	Jupiter. Right Ascension	Jupiter. Declination South.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	20h. 5m	22° 3′	17h. 6m	18° 14′	18h. 6m	24° 7′	13h. 20m	7° 0′	0h. 57m	3° 20′	1h. 39m	9° 41′	22h. 28m	10° 27′
6	20 29	19 54	17 5	17 42	18 23	24 4	13 21	7 11	0 57	3 25	1 39	9 41	22 28	10 24
11	20 43	17 50	17 8	17 29	18 39	23 55	13 23	7 19	0 58	3 31	1 39	9 42	22 29	10 21
16	20 39	16 30	17 14	17 32	18 56	23 38	13 25	7 27	0 59	3 28	1 39	9 43	22 29	10 18
21	20 18	16 26	17 23	17 45	19 13	23 16	13 26	7 31	1 0	3 46	1 39	9 44	22 30	10 14
26	19 53	17 17	17 35	18 4	19 29	22 46	13 26	7 35	1 1	3 55	1 40	9 46	22 31	10 10

JANUARY.

DESCRIPTIONS OF THE TWELVE MONTHS, BY THOMAS MILLER.

A wrinkled, crabbed man, they picture thee,
Old Winter; with a rugged beard, as grey
As the long moss upon the apple-tree
Blue-lipt, an ice-drop at thy sharp, blue nose;
Close muffled up, and on thy dreary way
Plodding alone through sleet and drifting snows.—SOUTHEY.

JANUARY comes with his awakening hand, and shakes grey-bearded old Winter in his chilly sleep, causing the icicles, which bind him down, to rattle again, while breathing into his frozen ear tidings that the days are lengthening, and bidding him hold himself in readiness to rise and make room for the tender snowdrops, which are already forcing their way through the earth his cold form presses down. How wearisomely would the year pass away, but for these changes!—but for the opening and shutting of the days—the coming and going of flowers—the arrival and departure of birds—the ever-varying races of insects—the wan coldness of Winter and the ruddy warmth of Summer—all giving to the year forms which correspond with our own changing existence! Hence we have the green and pleasant Childhood of Spring, the full and flowery Youthfulness of Summer, the ripe and fruitful Manhood of Autumn, and the garnered Old Age of Winter—not the "wrinkled, crabbed man," in the opening of the beautiful sonnet which heads our present month, but such as forms the conclusion, as:—

They should have drawn thee by the high-heapt hearth,
Old Winter! seated in thy great-armed chair,
Watching the children at their Christmas mirth
Or, circled by them, as thy lips declare
Some merry jest, or tale of murder dire,
Or troubled spirit that disturbs the night
Pausing at times to rouse the mould'ring fire,
Or taste the old October, brown and bright.

Still, there is something joyous and bracing in the cold air of Winter, to those who are fond of out-of-door exercise; it sets the blood dancing merrily through the veins, and gives to the cheeks a colour which rivals the rich red of the apple-blossom. Only watch a parcel of boys snow-balling each other, and see what a summer-like glow there is on every countenance. They feel not the cold, unless it be now and then a slight tingling at the finger-ends; and this they soon get rid of, by beating their hands lustily against their sides: rely upon it, this is better for their health than sitting doubled up, like old men of eighty, by the fireside. Give them a thick comforter round their necks, a pair of warm worsted gloves, see that their boots are also well laced, then bundle them out into the open air, and let Winter stamp their cheeks with his rosy fingers.

Supposing they go a few miles away, to see a coursing-match, or the hounds throw off, where's the harm? or even if they have got a gun out "on the sly," why let them blaze away: all these things will save doctor's bills, expand their chests, and lay the foundation of a life of "green old age." Every country-lad believes that hares and rabbits were made to be hunted and eaten: how can they think otherwise, when they see their elders so eagerly pursuing them? They are inspired with the spirit of hunting from the first hour when they see the ferrets let loose in the barn, and stand breathless watching the slightest stirring of the straw, which is the signal that the rats are on the move. Then comes a wider chase—the removal of a stack in the field or rick-yard, leaving a whole colony of vermin houseless, and causing them to run no end of ways for very life, while every boy in the village is hallooing—every mongrel barking with all his might—and an hundred sticks going like one, and pounding rats and mice "and such small deer" into paste.

Talk about poaching, bah! every lad who has the chance is a poacher; we ourselves were, soon after we were thrust into our first suit of corduroy. We well remember the first leveret our mongrel killed, and what delight danced about our heart at witnessing the act: true, it was on a wild waste of common-land, such as had never been cultivated since the first morning sun broke upon it; and we, in our boyish simplicity, believed that we had as much right to the bosky solitude as the proudest earl that ever broke its echoes with the sound of his bugle-horn. We would not have stolen into Squire A——'s preserves for the world;

a lamb or a chicken, or any thing that was really his, we coveted not, but as neither the hares nor the rabbits that run in the wilds were his or any other man's property, we caught them wherever we could. And so will they be caught when we are dead and gone, unless the blood-stained Game-Laws are altered. Poachers will be shot, and the brains of gamekeepers scattered about, while ever this contention exists; neither has any one living man a right to the wild game that runs free over the heaths, downs, commons, and unenclosed wolds and moorlands of Great Britain, free as when they were first formed by the Creator—they are, and ought to be, the property of all. Private parks, preserves, and cultivated estates are different. Look at the prison returns, at what the chaplains of jails have stated: you cannot convince a man that killing wild game in the open waste country is a crime. They would not even touch a pigeon if they knew it had an owner; but hares and rabbits, that are here to-day and far away to-morrow, they will never believe can be the personal property of any one, until caught. By Heaven, it makes our very blood rebel, when we think of the many beautiful wives that have been left husbandless, children fatherless, and parents childless, through these sanguinary and merciless Game-Laws. What a red catalogue it would be, that enumerated the names of all whose blood they have caused to be spilt. Why does not friend Bright move for such a return, extending over the last half-century?

If our law-makers think that the killing and eating of either rabbit or hare lies heavily on the consciences of the peasantry, they are woefully mistaken. Old Betty Bowser, who attends church regularly, will not boggle at placing the hare her son Bill's lurcher killed on her form, comfortably in the iron pot, between layers of mealy potatoes and onions, and reading her well-thumbed Bible, while puss simmers gently on the hob for two or three hours. We are no advocates of poaching, but we do feel that it is wrong for the rich to monopolise the game on all the waste lands and wide open breezy wolds of England, and contend that these and large portions of our old rivers ought to be free to all, even the raggedest urchin that wanders with his half-starved and ugly cur at his heels.

Sommerville, in his "Field Sports," even while "toadying" to the "Gentlemen of England," cannot rein in the poetical spirit which is carrying him away, but is compelled to admit that even the poor enjoy rural sports equally with the rich, although their share of the sport is only to look on. He says:

> Observe the attentive crowd; all hearts are fixed
> On this important war, and pleasing hope
> Glows in each breast. The *vulgar* and the great,
> Equally happy now, with freedom share
> The common joy. The shepherd-boy forgets
> His bleating charge; the labouring hind lets fall
> The grain unsown—in transport lost, he robs
> The expecting furrow, and in wild amaze
> The gazing village stands.

Although this extract alludes to Falconry, it applies equally to all other rural sports, and is a true picture of the interest the peasantry take in all such recreations. Thank God! we have now no such scenes as Pope describes in his "Windsor Forest," where

> A beast or subject slain
> Were equal crimes in a despotic reign—
> Both doom'd alike, for sportive tyrants bled;
> But while the subject starved, the beast was fed.

Hare-coursing on a fine frosty day is a glorious recreation. There ought not to be any snow on the ground. It is a sport that both horsemen and pedestrians can enjoy, as the turnings are often made in sight, in a fine open country. A wild wide heath is a beautiful spot to select, with patches of gorse here and there, and straggling clumps of bushes. Those who sneer at coursing ought not to forget that it is a classical sport, and was followed by the ancient Greeks and Romans.

Look at that brace of greyhounds in the leash: saw ye ever anything more beautiful? "the speed of thought is in their limbs; no antelope was ever seen lighter of foot than they are, no doe more graceful, no race-horse more perfectly built for running: look at their fore-legs, they are straight as arrows; their loins bent like the bow Diana herself bears; their necks elastic as a swan's; their ears long and soft as silk purses; their heads sharp as a snake's, and their eyes bold, bright, and beautiful as a mountain maid's when she first recognises the form of her lover through the golden mist; and their chests are broad and full as Donald's, who, wrapp'd in his plaid, comes to return her greeting. When at full speed they cover the ground like the shadow of a graceful branch, tapering away until it is invisible like their tails, which honest Mat Prior must have been thinking about when he wrote the so-often-quoted line of

> Fine by degrees, and beautifully less.

True he applies it to the bosom and graceful waist of a lady, the only object in creation we can place above the beauty of a greyhound, especially such as one of those we have now in our eye, so alike, that one could not be distinguished from the other, saving for the collar, which the laws of coursing require one should wear when there is so close a resemblance between them, as if they had grown together,

> Like to a double cherry, seeming parted,
> But yet a union in partition—
> Two lovely berries moulded on one stem;' SHAKSPEARE.

and, above all, of that rich fawn-colour which we so much admire. Look how the beautiful creatures tug at the leash, all eye, all ear.

Hush! hark! that "Soho" comes from the finder; there the hare goes—a true racer by the build of her, she steals away and does not appear to be much alarmed. The dogs have heard the "Soho;" they see the hare—look how they rear up and tug at the leash. The judge has his calm eye on poor puss, he will at least give her fourscore yards start, and his practised eye can measure the ground almost to a yard. Look how steadily both the dogs bear on the collar. The word "Go" is given, and just "at the self-same heat of Time's grey wings" they are off together, nose to nose, ear to ear—there is not the thickness of a walking-stick between them in distance at the moment of starting. Now the hare pricks up her ears—she caught the halloo given when the slipper started them. Danger and death dog thy heels, poor hare; and unless thou shouldst reach yonder distant covert, seen dimly from hence, thy fate is sealed. How they gain upon her, how they cover the ground! They seem to touch her: one has overshot himself and she is turned; he must have been some distance ahead to keep the lead as he still does, or he would have driven the hare into blue-collar's mouth. See! she is making back to the covert whence she was first started: this the inside dog perceives, by the short cut he is making—that is hardly fair, my fine fellow, although you will gain a point by your policy. Well done! he has got the lead by that manœuvre, and blue-collar is now behind, though he has followed her fairly and not missed a yard of ground she went over, excepting when he overshot himself. Hurrah! blue-collar gains on the other dog, and see he has turned her again; he is the swiftest and the stoutest dog, for at that speed such sudden turning must be distressing—no race-horse in the world could jerk round so instantaneously—it is done before one has time to say "It lightens." Now they are doubling back; there are fences for you—saw you ever so clear a leap? That was no wrench, but a fair turn—the third blue-collar has made. Where is the hare making to? if to yonder high old hawthorn hedge, and she has a run only known to herself, she will escape, unless the gap is large enough for the dogs to creep through it. That old, high, thick, long hedge has never been cut within the memory of man, and there is neither horse nor dog in the world able to clear it. It is as we expected; she has escaped—there is no kill, and there the course is ended—the point's in favour of blue-collar beyond all doubt, whether the prize be for a silver collar, a cup, or five hundred good pounds. We will not trouble our readers with an explanation of all the technical phrases used in hare-coursing, beyond stating that the points are "A go-by, a cote, a turn, a wrench, a tripping, a jerking, and a hill of merit;" as some of these appear to be synonymous, and the true meaning of one or two is doubtful, being as old at least as the time of Queen Elizabeth, we can only refer our readers to the rules of Mr. Thacker, which are acknowledged by all coursers to be the fairest clearest, and most satisfactory that were ever drawn up.

Although, during the past Winter, the North of England and some parts of Scotland were rendered impassable by heavy falls of snow, yet, when compared with such as Hogg describes in his "Shepherd's Calendar," it seems as if the old Winters had for ever fled. He makes mention of a snow-storm which drifted to such a depth in the mountain passes as almost to have reached to the tops of the trees. For thirteen days and nights did the snow fall without ceasing, causing hundreds of sheep to sink into a heavy, cold, motionless sleep, from which they never again awoke—that so many died, walls were made of their dead bodies, to screen those from the cold which remained alive—that whole flocks were buried beneath the snow, and no one could tell where they were lost until the drift melted away, when the bodies were found with the heads all turned one way. "Numbers," he says, "were swept away by the floods which followed, and near one place, at a stoppage in the river, nearly two thousand sheep and one hundred and eighty hares were found dead. Shepherds went about," he tells us, "boring into the snow with their long poles, and scarcely found a single sheep in a quarter of an hour; until, at last, a shepherd dog seemed clearly to understand what they were searching for, and running about upon the snow, he began to scratch and look at the shepherds, as if to draw their attention to him, and in every spot he pointed out they found a sheep beneath, and through the assistance of the dog were enabled to save two hundred, which, without his sagacity, must have been lost."

There is something very solemn in the appearance of a country covered with snow on a cloudy day, especially if you look over some point of it that is uninhabited; for there are none of those sounds heard, or rural objects seen, which float and move the same scene in Summer. The birds are either silent or hidden, and the cattle which gave such a charm to the landscape are driven from the fields. You miss the figures that dotted the scenery while following their rural employments; scarce a whistle or a shout are heard amongst the woods and hills; the voices of the children are silent in the green lanes, and the echo of a gun only seems to make the stillness more solitary, after it has died away. Nor is it less interesting to watch the snow falling upon the face of a river: to see flake after flake settle down, float along for a brief second, and then dissolve for ever; or to see the large flakes descend in seeming lines across each other, while two come in contact, cling together, then fall softly to the ground. Sometimes you see a countryman, in his heavy-nailed boots, pause to kick off the hard "cakes" of snow which have clung to his boot-soles, or notice the lumps lie on the highway after he has shaken them off, with the mark of every nail stamped upon them. All these are little morsels of the great Picture of Winter out of doors; while within

> The cottage-hind
> Hangs o'er the enlivening blaze, and taleful there
> Recounts his simple frolic: much he talks,
> And much he laughs, nor recks the storm that blows
> Without, and rattles on his humble roof. THOMSON.

FEBRUARY.

MARIA DA GLORIA, QUEEN OF PORTUGAL, BORN APRIL 4, 1819; ASCENDED THE THRONE MAY 2, 1826.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon	MOON. Souths. Height above horizon.	MOON. Sets. Afternoon	Moon's Age	Day of the Year
			H. M.	M. s.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		
1	S	Pheasant and Partridge shooting ends.	7 41	13 52	21¼	4 47	7 56	0 27	20½	5 4		32
2	S	*Purifi.* Can. D.	7 40	14 0	21¾	4 49	8 24	1 12	23½	6 7		33
3	M	*Blaise*	7 38	14 7	22	4 50	8 49	1 56	27	7 12		34
4	Tu	Alpha Arietis south 5h 1m P.M.	7 36	14 13	22¼	4 52	9 11	2 38	31	8 11		35
5	W	*Agatha*	7 34	14 18	22½	4 54	9 30	3 20	35¼	9 20		36
6	Th	Pleiades south 6h 33m P.M.	7 32	14 23	22¾	4 56	9 51	4 3	39½	10 26		37
7	F	Length of day 9h 27m	7 30	14 26	23¼	4 57	10 12	4 46	44	11 32		38
8	S	Half-Qu. Day	7 29	14 29	23½	4 59	10 35	5 31	48¼	Morning.		39
9	S	5TH S. aft EPIPH.	7 27	14 31	23¾	5 0	11 0	6 19	52	0 40		39
10	M	Queen Victoria married, 1840	7 25	14 32	24	5 2	11 30	7 11	55½	1 51		40
11	Tu	Day breaks 5h 29m A.M.	7 24	14 33	24½	5 4	Afternoon	8 6	57¾	3 3		41
12	W	Twilight ends 7h 0m P.M.	7 22	14 32	24¾	5 6	0 55	9 5	58¾	4 11		42
13	Th	Day increased 2h 4m	7 20	14 31	25	5 8	1 56	10 6	58¼	5 16		43
14	F	*St. Val.* O. C. D.	7 18	14 29	25½	5 10	3 8	11 8	56½	6 10		44
15	S	Aldebaran souths 6h 46m	7 16	14 26	25¾	5 12	4 29	Morning.	—	6 58		45
16	S	SEPTUAGESIMA	7 14	14 23	26	5 14	5 53	0 9	53	7 35		46
17	M	Capella souths 7h 17m P.M.	7 12	14 19	26½	5 16	7 15	1 8	48¼	8 8		47
18	Tu	Rigel souths 7h 14m P.M.	7 10	14 14	26¾	5 18	8 40	2 4	43	8 35		48
19	W	Length of day 10h 11m	7 9	14 9	27¼	5 20	10 0	2 57	37¾	8 59		49
20	Th	Sirius souths 8h 38m P.M.	7 7	14 2	27½	5 21	11 17	3 49	32½	9 25		50
21	F	Length of night 13h 42m	7 5	14 56	27¾	5 23	Morning.	4 39	27¾	9 50		51
22	S	Castor souths 9h 16m P.M.	7 3	13 48	28¼	5 25	0 32	5 29	23½	10 17		52
23	S	SEXAGESIMA S.	7 1	13 40	28½	5 27	1 42	6 19	20¾	10 50		53
24	M	*St. Matthias*	6 59	13 32	29	5 29	2 47	7 9	18¼	11 28		54
25	Tu	Procyon souths 9h 3m P.M.	6 56	13 22	29¼	5 30	3 46	7 59	17	Afternoon		55
26	W	Camb. Term div.	6 54	13 11	29¾	5 32	4 36	8 48	17	1 1		56
27	Th	Pollux souths 9h 4m P.M.	6 52	13 2	30	5 34	5 20	9 37	17¾	1 58		57
28	F	Length of day 10h 46m	6 50	12 51	30½	5 36	5 56	10 24	19¾	2 57		58

DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h. After Sunset. O'Clock. 6h. 8h. 10h.

HIGH WATER AT LONDON BRIDGE.

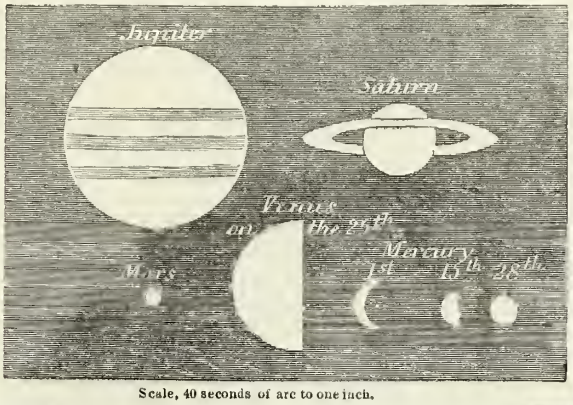
Morning		Afternoon	
H.	M.	H.	M.
2	25	2	40
3	0	3	20
3	35	3	50
4	5	4	20
4	35	4	50
5	5	5	25
5	40	5	55
6	15	6	35
6	55	7	15
7	40	8	10
8	50	9	25
10	5	10	45
11	30	No Tide.	
0	5	0	35
1	5	1	35
1	55	2	25
2	50	3	15
3	35	4	0
4	20	4	40
5	5	5	25
5	45	6	5
6	30	6	50
7	15	7	40
8	10	8	45
9	25	10	5
10	45	11	25
No Tide.		0	5
0	40	1	5

FEBRUARY.

THE SUN is situated south of the Equator, and is moving north; he is in the sign Aquarius till the 19th, having been in this sign 29 days 14 hours 52 minutes. On the 19th, at 5h. A.M., he enters the sign Pisces (the Fishes). His distance from the earth on the first day is 93,642,000 miles. He rises and sets on the 11th at the E.S.E. and W.S.W. points of the horizon.

He will be eclipsed on the first day, which eclipse will not be visible here. From parts of the Indian Ocean it will be seen central and annular; and will be visible in Australia, New Zealand, and the Cape of Good Hope, &c. It begins on the 1st at 3h. A.M. Greenwich time, and ends at 8h. 45m. A.M.

RELATIVE TELESCOPIC APPEARANCE OF THE PLANETS IN FEBRUARY, 1851.

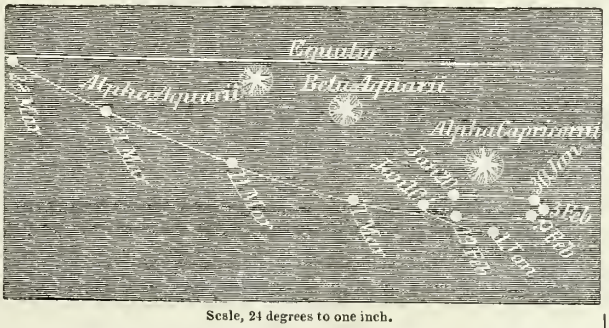


Scale, 40 seconds of arc to one inch.

The MOON is in the constellation Capricornus till the 2nd, on which day she passes into Aquarius; on the 4th, into Pisces; on the 6th, into Cetus; on the 8th, into Aries; on the 9th, into Taurus; on the 11th, into Orion; on the 12th, into Gemini; on the 14th, into Cancer; on the 15th, into Leo; on the 17th, into Virgo; on the 21st, into Libra; on the 22nd, into Scorpio and Ophiuchus; on the 24th, into Sagittarius; on the 27th, into Capricornus; on the 29th, into Aquarius.

She is above the horizon when the Sun is below, during the morning hours, from the 10th to the 23rd; and during the evening hours from the 3rd to the 17th.

PATH OF MERCURY FROM JANUARY 1 TO MARCH 31, 1851.



Scale, 24 degrees to one inch.

She is situated south of the Eqnator till the 6th, when she is on the Equator; is at her extreme north declination on the 13th; again on the Equator on the 19th; and at her extremo south declination on the 26th.

She is near Saturn on the 6th; Uranus on the 7th; Aldebaran on the 10th; Jupiter on the 19th; Venus on the 26th; Mars and Mercury on the 28th.

MERCURY is in the constellation Sagittarius till the 13th; and on the 14th enters Capricornus.

He rises before the Sun throughout the month; he is, therefore, visible some little time before sunrise. On the 1st he rises at 6h. 29m.; and from the 9th, at about 6h. 13m. till the end of the month. From the 1st to the 10th, the interval of time between the rising of the planet and the Sun is about 1¼ hour; after the 11th this interval decreases, and is one hour on the 17th, and 37 minutes on the last day. He rises near the S.E. by E. throughout the month. He is stationary among the stars on the 2nd; and from the 3d is moving eastward. He reaches his greatest western elongation on the 15th; is in Aphelion on the 27th, and is near the Moon on the 28th. His path in the heavens is shown in the annexed diagram, in which his place on the 28th has the same relation to the stars near him, as that of Mars on the same day to the same stars as shown in the diagrams of the path of Mars inserted in next month; therefore the two planets are near together.

VENUS is in the constellation Ophiuchus till the 3rd, and in Sagittarius from the 4th till the end of the month. She is a brilliant morning star, and rises on the 1st at 4h. 35m. A.M.; and on the last day, at 4h. 42m., midway between the E.S.E. and S.E. by E. points of the horizon. She is moving eastward among the stars; is at her greatest W. elongation on the 25th; and is near the Moon on the 26th. Her path in the heavens, and her relative position to bright stars near her, are shown in the diagram below.

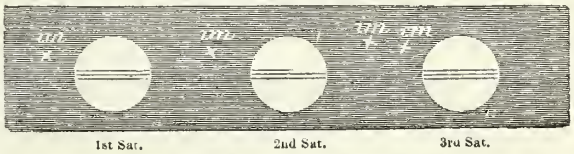
MARS is in the constellation Sagittarius till the 4th; and in Capricornus from the 5th to the end of the month. He rises on the 1st at 7h. 2m. A.M., and on the last day at 6h. 5m. A.M., near the S.E. by E. at the beginning, and midway between that point and the E.S.E. at the end of the month, and is not favonrably situated for observation. He is moving eastward among the stars, and is near the Moon on the 28th. For his path in the heavens, and relative position to bright stars near him, see the diagam in next month.

PATH OF VENUS FROM JANUARY 1 TO MARCH 29, 1851.

Scale, 24 degrees to one inch.

JUPITER is in the constellation Virgo throughout the month. He is a morning star, and rises on the 5th day at 11h. 0m. P.M., and on the last day at 9h. 24m. P.M., at the E. by S. point of the horizon. He is stationary among the stars at the beginning of the month, and begins to move very slowly westward towards the end of the month, and is near the Moon on the 19th. He souths at an altitude of about 31° throughout the month. For his situation in the heavens with respect to bright stars near him, see the diagram in the month of June.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



(*Continued on page* 13.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon	Neptune. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 53	9 8	11 4	4 41	4 18	1 45
6	10 36	9 5	11 1	4 24	4 0	1 27
11	10 29	9 3	10 58	4 5	3 41	1 9
16	10 29	9 3	10 54	3 45	3 24	0 50
21	10 33	9 3	10 50	3 25	3 6	0 31
26	10 40	9 5	10 46	3 4	2 48	0 12
28	10 44	9 5	10 45	2 55	2 41	0 5

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.	3rd Sat. Im. I.	Emer. E.
D. H. M.	D. H. M.	
1 11 37 P.M.	2 1 43	A.M. I.
7 7 2 A.M.	2 4 19	A.M. E.
9 1 30 A.M.	9 5 41	A.M. I.
16 3 24 A.M.		
23 5 17 A.M.		
24 11 45 P.M.		
2nd Sat.		
12 1 31 A.M.		
19 4 5 A.M.		
26 6 39 A.M.		

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
h Virginis	5	18 1 2 A.M.	Bright	7° N. &
		18 2 9 A.M.	Dark	90° N.
Eta Libræ	4	22 5 11 A.M.	Bright	22° N. &
		22 6 28 A.M.	Dark	75° N.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

NEW MOON	1d.	6h.	2m.	A.M.
FIRST QUARTER	9	8	56	A.M.
FULL MOON	16	3	28	A.M.
LAST QUARTER	22	9	38	P.M.
APOGEE	2	At Noon.		
PERIGEE	16	1		A.M.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination South.	VENUS. Right Ascension	VENUS. Declination South.	MARS. Right Ascension	MARS. Declination South.	JUPITER. Right Ascension	JUPITER. Declination North.	SATURN. Right Ascension	SATURN. Declination North.	URANUS. Right Ascension	URANUS. Declination North.	NEPTUNE. Right Ascension	NEPTUNE. Declination South.
1	19h. 37m	18° 35′	17h. 52m	18° 31′	19h. 49m	22° 3′	13h. 27m	7° 37′	1h. 3m	4° 6′	1h. 40m	9° 49′	22h. 32m	10° 5
6	19 40	19 25	18 9	18 50	20 5	21 20	13 27	7 37	1 4	4 16	1 40	9 54	22 32	10 1
11	19 53	19 51	18 27	19 5	20 21	20 31	13 27	7 35	1 6	4 27	1 41	9 55	22 32	9 57
16	20 12	19 48	18 46	19 13	20 37	19 37	13 27	7 32	1 7	4 39	1 42	9 59	22 33	9 53
21	20 36	19 14	19 6	19 11	20 53	18 37	13 26	7 26	1 9	4 51	1 42	10 3	22 34	9 49
26	21 3	18 7	19 27	18 59	21 9	17 32	13 25	7 20	1 11	5 4	1 43	10 8	22 35	9 45

FEBRUARY.

Thou lingerest, Spring: still wint'ry is the scene;
The fields their dead and sapless russet wear;
Scarce does the glossy celandine appear
Starring the sunny bank, or, early green,
The elder yet its circling tufts put forth.—SOUTHEY.

FEBRUARY looks out with its leaden-coloured sky from between the trees in the beautiful Engraving which our talented Artist has sketched for the heading of the present month: the fallow field, with its brown barren ridges, tells us that even the celandine has not yet bared its golden bosom to the sun, and that what little is seen of the daisies resembles dark green beads, scattered carelessly among the low, thin grass. It is the month in which Nature begins to awaken, in which she yawns, and blinks, and feels about as if trying to find a flower or two; in which she rubs her arms and finds that they are becoming a little rougher through the bursting of the buds, and through her "dazed vision" catches glimpses of the dim green of the elder, and feels at times a warmth upon her cheeks which tells her that she is not forgotten by the sun. At times one may fancy that we hear Spring sighing somewhere, as if she longed to be set free, but was still retained a prisoner; that it was on some cold day in this month when she first formed the snowdrop, as her warm breath blew through the bitter wind and gave the form of the flower to some falling snow-flake, which, impregnated by her flowery lips, fell, and took root in the earth; and that ever after she sent the little flower as her herald to Winter, to tell him that the time of his departure was at hand, thus making it the

Pensive monitor of fleeting years.—WORDSWORTH.

Still this dreary season has charms for the sportsman, and we will now carry our readers away to the wild water-courses, and melancholy meres which run and expand over wide marshes and reedy fens, where the bittern booms, and the heron stands solitary and silent for hours, while the tufted plover flies with a wailing sound over the lonely landscape. In the low fens of Lincolnshire and Cambridgeshire, where wildfowl are most plentiful, there are hundreds of acres of land covered only with reeds and rushes and broad water-flags; between which deep sluices boil and murmur as they hasten on with headlong speed to empty themselves into some neighbouring river; and as the deep waters roll and tear along, they rock the black bulrushes and the tufted reeds, and give a wavy and dreamy motion to the overhanging willows, under which you glide noiseless as death, and making no more sound, as you drop your oar into the deep sullen water, than if you were cleaving a silver cloud with the feather of an eagle. Here and there ever keep rising the full-fed mallard with its head and neck of the richest velvet green, or the delicious teal, which only to mention sets the mouth a watering, while clouds of lapwings and plovers sweep above the far-stretching forests of reeds, and sometimes the wild swan springs up like a sheeted ghost amid the solitude, and flaps

The clouds away with playful scorn.—BYRON.

And in these lonesome marshes and houseless fens, the sportsman must make up his mind patiently to endure cold and wet, and be content to feed upon the half-frozen sandwiches he carries with him, and to raise his eyes thankfully every time he sips his cheering cognac, blessing the maker of it from his heart, whether he be a Frenchman or an Englishman, and knowing that but for his still he would have to lean over the edge of his punt, and sip the chilly snow-water of the sluice, which only to think of makes one shiver. As for dress, the nearer you approach a sea fisherman's in that the better: huge water-boots you must wear; and if you never donned flannel before, you will in such scenes, and at such a season, pronounce it as comforting as a couple of extra blankets thrown on the bed on some such bitter night as when the water freezes in your chamber.

The almost noiseless dip of the paddle will sometimes startle these quick-eared inhabitants of the fens and marshes; and when you are drawing near to the spots which they most frequent, the boat must be pulled along by clutching the overhanging weeds and willows—nor must the sportsman shrink from seizing them, though they are as cold and keen as steel, and seem to cut to the very bone. One handful after another must be grasped and loosed gently, while the boat is drawn along her soundless way; and if a sharp-edged water-flag, stiff with hoar-frost, smites the cheek like the edge of a sword, it must be borne without a murmur, and not an echo awakened louder than that made by the wind, as it goes whispering through the ever nodding sedge. The dawn of morning and the moonlight of evening must also be taken advantage of by the sportsman, as many of the birds only come into the open spaces which abound in coarse grass to feed at these periods. This, however, is of more importance to wild-fowl shooters on the sea-coast. But, before firing a shot, we must honour our pages with the following beautiful picture, by the American poet, Bryant, o.

A WATER-FOWL.

Whither, midst falling dew,
While glow the heavens with the last steps of day,

Far through their rosy depths, dost thou pursue
Thy solitary way?

Vainly the fowler's eye
Might mark thy distant flight to do thee wrong,
As darkly painted on the crimson sky,
Thy figure floats along.
* * * *
All day thy wings have fann'd,
At that far height, the cold thin atmosphere,
Yet stoop not, weary, to the welcome land,
Though the dark night is near.

And soon thy toils shall end,
Soon shalt thou find a summer-home, and rest
And scream among thy fellows; reeds shall bend
Soon o'er thy shelter'd nest.

This is indeed the true word-painting of poetry, in which every touch bespeaks a master-hand.

Hold! and we will try a shot at yonder heron which seems standing in a deep study on the little rounding ledge that projects beyond the background of reeds. That bird will stand for hours motionless as a monument, fixed as a mile-stone—so still that the young fry swim to and fro over his shadow in the water as if it were the stem of a tree, or a clump of reeds mirrored therein. He appears to regard them not, although his bright piercing and immoveable eye is awake to every motion, for well he knows that their full-grown fathers and mothers will soon venture amongst them to see how they are behaving themselves. He is right; anon they come, when quick as thought the father of the family is in his long bill, where he has no more chance of escape than a rat in a new sharp-toothed trap; the mother and her plump sisters are perhaps at the same moment writhing under his feet, from which escape is also hopeless, such secure hold has he with his saw-like centre claws.

Bang! there he goes, he little dreamed we were so near at hand; his rich plumes are already dabbled with mud. Keep back the dog, on your life, unless you want the bill of the dying heron to be driven through his brain: you know not what danger there is in approaching him, his dying struggles are like a giant's; were you near enough, and he had the chance, he would plunge his keen bill into you with as much force as the arm of a strong man would drive a dagger into your body. The only safety is as we have him now—the foot planted on his neck, like conquerors of old.

The bittern is also a dangerous bird to approach when wounded, and very difficult to shoot, wheeling round rapidly as it rises; and when it has reached a considerable altitude, off it goes, straight ahead, like a shot. No more dolorous sound can be heard in the fens on a dismally dark night than the boom of the bittern. Milton might have made his fallen angels imitate it, from their "innumerable tongues," when Satan

Would have spoke,
But hiss for hiss return'd with forked tongue
To forked tongue.

Colonel Montague, in his "Ornithological Dictionary," says, "It is like the interrupted bellowing of a bull, but hollower and louder, and is heard at a mile distance, as if issuing from some formidable being that resided at the bottom of the waters.

That shot at the heron has startled all the wild-fowl for a full mile round, so we must make our way deeper into the fen, through these extended armies of rushes, that stand like ranged soldiers, bowing their heads to their commander as he passes. In many places the edges of these banks will shine like bosses of gold a month or two hence, when the huge marsh marigolds are in flower, and many a rare aquatic plant may then be found here, which you might wander weary leagues in search of in vain elsewhere. The white stem of that pollard in the distance looks like the ghost of some old fen-man, which has risen up from the deep hole in which he was drowned hundreds of years ago, to oppose our further passage. See, out there, how the eddies boil round and round! That spot cannot be fathomed. I only know another like it, and that is in the river Mole, behind the Academy at Leatherhead. There, underneath the shadows of the tall trees, the proprietor assured us that he had endeavoured in vain to find a bottom.

We are now viewing a likely spot for finding wild ducks; a fen-boy knows how to distinguish them from tame ones, by their black claws. We will land here: keep the dogs behind—for the present they will be more useful in fetching than finding—for here "they most do congregate." Here they come against the wind, and fortunate we are that they fly so low. Aim a little ahead. There you go, my beauties, head foremost! and your sleek, speckled-bosomed dames are following you, topsy-turvy. What a scattering of rainbow-hued plumage! Saw ye ever an emerald richer than the colour of this mallard's neck; look also at this ring, white as ivory. Ah, Ponto, you may wag your tail—you know no better: we do; and hardly know whether or not we have a right to deprive these beautiful creatures of life, under the plea that we are the "Lords of Creation."

After all, they are not equal to the teal in flavour, although he is the smallest of the whole duck tribe, and the most difficult to kill. He seems to think that his safety depends upon flying as low as possible; and, when started, will content himself with skimming over the surface, where he becomes a sure mark. Col. Hawker says, "If you spring a teal, he will not rise up and leave the country, like a wild duck, but most probably keep along the brook, like a sharp-flying woodcock, and then drop suddenly down; but you must keep your eye on the place, as he is very apt to get up again, and fly to another, before he will quietly settle. He will frequently, too, swim down stream, the moment after he drops; so that if you do not cast your eye quickly that way, instead of continuing to look for him in one spot, he will probably catch sight of you, and fly up, while your attention is directed to the wrong place."

All diving birds are hard to shoot, for they are so quick of sight, that the instant the flash of the gun is seen they are under water; this is called "ducking the flash," and the surest plan to kill is to aim under, instead of at them. Nor are they easily killed, but will stand some pretty hard knocks before they fall, unless they happen to be struck on the head, or winged.

Widgeons and dun-birds are now so common, that it would but be a waste of space to dwell upon the means adopted for their capture. Decoys are now generally used; and in one pond in Essex, as many dun-birds were taken at one "drop" as filled a waggon, and so densely were the birds crowded together in the pens, that the very weight of the poles and nets which fell upon them squeezed the undermost birds quite flat as they lay upon each other like a "cloud of bees."

To shoot a water-hen or a water-rat is the first exploit of a fen-boy when trusted with a gun; for the water-hen is a rapid diver, so is the water-rat, and both are believed to be so sharp of hearing, that the very sound of the click of the lock reaches them before the shot is fired. Then if the moor-hen chanced to be winged in a field, what a glorious race we had to overtake her: talk of a "lamplighter" running! he moves like a cripple compared with the water-hen.

All who know the pewit or lapwing, with its beautiful crest of feathers, are aware of its manner of darting, jerking, and wheeling on the wing; as an old Lincolnshire fen-shooter used to say, it was as "hard to hit as a gnat." When boys, we captured the young ones by fastening strings round their legs and pegging the string into the ground, leaving the parent birds to feed the little prisoners until they were well penned and ready to be taken; for if we once left them in the nest free until they could run, we seldom saw them again. In our young days they were kept commonly in gardens, their wings cut to prevent their escape; and handsome fellows they looked with the tuft of plumes blowing about their heads. It is said that this bird is so artful, that it will make a noise on the ground like a mole, and that the worm, hearing the sound, mistakes it for his underground enemy, and comes out and is swallowed by the watchful lapwing. Golden and grey plovers, god-wits, coots, water-rails, and the whole tribe of birds that frequent marsh and mere, rivers and reeds, fens and flats, we must pass over, our only apology being the limits of our page. The wild fens are no longer what they were; the broad beds of reeds and osier-holts are disappearing, and over some of our once hedgeless Lincolnshire marshes the railway engine now hurries with fiery speed.

Many an old river-bed is now dry, over which the ancient Britons paddled their wicker coracles, or boats covered with the "black bull's hide;" and you now see only the dry high banks upheaving on either hand, and walk in the waterless river-bed, where centuries ago Saxon and Danish vessels sailed. You might in such places fancy that you were wandering through an uninhabited world, or that every trace of those who had formerly lived in those lonely solitudes was swept away. Rude huts overlooking the river, from which, in early days, the skin-clad fisherman watched the huge sturgeon swim, and the black porpoise roll, while the salmon glanced past like a ray of moonlight, as it showed its silvery scales; and where the huge pike darted upon its prey, while the bittern murmured in the marsh, and the plover wailed above the willows, and sharp-edged water-flags rustled together and made a melancholy sound, amid the fretting of the waters.

'Twas a wild spot: for there, old legends say,
In ancient days a rude stone bridge had stood;
And that two thousand years had pass'd away,
Since first its arches span'd the rapid flood.
And there, they say, the Roman troops passed o'er,
And drove the ancient Britons from the opposing shore.

And huge gigantic blocks, all quaintly wrought,
Half-buried here and there, still lie around;
And battle-weapons rude, with which they fought,
In that old river-bed are often found;
Bucklers, and bows, and clubs, and dead men's bones
Have been dug up beneath those mouldering stones. T. M.

I shall conclude my description of this month with a picture of the Village Carrier, from my "Book of Winter:"—

Lonesome and dreary are many of the places which the old carrier has to pass in winter—the lengthy road between the low fir plantations which a quarter of a century ago was infested by highwaymen—the weary marsh with its long sluice of water which looks as black as ink when the surrounding scenery is covered with snow, and the great frozen reeds and rushes stand up stiffly, and the water-flags looking as if they would cut you with their sharp edges, while the bushes, that bend over the pool, have a cold white forbidding look, making you feel that if you were to fall into the water, you would hardly like to lay hold of the keen, biting, frozen sprays to save yourself, so bitter cold do they appear. We can fancy that the old carrier feels this when returning home by himself on a dismal Winter's night, for he has been heard to remark that the mere in the marsh "would be a nasty place for a man to have a night's lodging in." On dark nights he hangs his lantern at the point of his cart; and if the air is clear and you stand on some embankment, you can see the light, and you fancy for a time that it is stationary, so slowly does he move. And sometimes the wide marshes are flooded; but unless the waters are above what he calls "girth deep," he still continues his journey to the market-town, for a tree, bush, or post are to his accustomed eye safe landmarks. He can even tell by the depth of the water whether his horses are keeping the right path or not. We have presented him in the pages of the Illustrated London Almanack as a relic of a past age, for the railways will ere long sweep his occupation from the face of the earth.

OSCAR, KING OF SWEDEN AND NORWAY, BORN JULY 4, 1797; ASCENDED THE THRONE MARCH 8, 1844.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 5h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 7h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	*St. David*	6 48	12 40	30¾	5 38	6 27	11 10	22⅓	4 0		28		1 30	1 45	60
2	S	Quinquagesima	6 46	12 28	31¼	5 39	6 54	11 54	25¾	5 3		29		2 5	2 25	61
3	M	[or Shrove S.	6 44	12 15	31½	5 41	7 16	Afternoon	29½	6 8		○ 1		2 40	2 55	62
4	Tu	*Shrove Tuesday*	6 42	12 2	32	5 43	7 37	1 19	34	7 12		2		3 10	3 25	63
5	W	*Ash Wednesday.*	6 40	11 49	32¼	5 44	7 57	2 2	38¼	8 19		3		3 40	3 55	64
6	Th	[Lent begins	6 38	11 35	32¾	5 46	8 22	2 45	42¾	9 24		4		4 10	4 25	65
7	F	*Perpetua*	6 36	11 21	33¼	5 48	8 39	3 29	47	10 32		5		4 45	4 55	66
8	S	*O. St. Matthias*	6 33	11 6	33½	5 50	9 2	4 15	51	11 40		6		5 10	5 25	67
9	S	1st Sun. in Lent	6 31	10 51	33¾	5 51	9 31	5 4	54½	Morning.		☽		5 45	6 5	68
10	M	Day breaks 4h 34m	6 28	10 36	34¼	5 53	10 4	5 57	57¼	0 50		8		6 25	6 45	69
11	Tu	Twilight ends 7h 49m	6 26	10 20	34¾	5 55	10 46	6 52	58¾	1 57		9		7 10	7 35	70
12	W	*Ember Week*	6 24	10 4	35	5 57	11 40	7 50	59	3 1		10		8 9	8 50	71
13	Th	Sirius souths 7h 15m P.M.	6 21	9 47	35½	5 59	Afternoon	8 50	57¾	3 58		11		9 35	10 20	72
14	F	Length of day 11h 42m	6 18	9 30	35¾	6 0	1 58	9 49	55½	4 47		12		11 5	11 45	73
15	S	Castor souths 7h 54m P.M.	6 16	9 13	36¼	6 2	3 20	10 48	51	5 28		13		No Tide.	0 20	74
16	S	2nd S. in Lent	6 13	8 56	36¾	6 4	4 41	11 45	46	6 3		14		0 50	1 15	75
17	M	*St. Patrick*	6 11	8 39	37	6 6	6 8	Morning.	—	6 32		● 15		1 45	2 10	76
18	Tu	Prs. Louisa born	6 9	8 21	37⅓	6 8	7 31	0 40	40½	6 58		16		2 30	2 55	77
19	W	Procyon souths 7h 44m	6 7	8 3	37¾	6 9	8 52	1 34	35	7 24		17		3 15	3 40	78
20	Th	Spring Qr. begins	6 5	7 45	38¼	6 11	10 10	2 26	29¾	7 48		18		3 55	4 20	79
21	F	*Benedict*	6 3	7 27	38⅔	6 12	11 26	3 18	24½	8 16		19		4 40	4 58	80
22	S	Newton died, 1727	6 1	7 9	39	6 14	Morning.	4 10	21⅔	8 46		20		5 20	5 40	81
23	S	3rd S. in Lent	5 59	6 50	39½	6 15	0 36	5 2	18¾	9 24		21		5 55	6 20	82
24	M	Alpha Hydræ souths 9h 13m P.M.	5 57	6 32	39¾	6 17	1 38	5 53	17¼	10 6		☾		6 40	7 5	83
25	Tu	*Annun. Lady D.*	5 54	6 13	40¼	6 18	2 34	6 44	16¾	10 54		22		7 30	8 5	84
26	W	P. Geo. Will. b.	5 52	5 55	40½	6 20	3 21	7 33	17¼	11 48		23		8 45	9 30	85
27	Th	Regulus souths 9h 42m	5 50	5 36	41	6 22	3 59	8 21	18¾	Afternoon		24		10 10	10 50	86
28	F	Length of day 12h 37m	5 47	5 18	41½	6 24	4 28	9 7	21¼	1 49		25		11 30	No Tide	87
29	S	Day increased 4h 57m	5 45	4 59	41¾	6 26	4 58	9 51	24½	2 52		26		0 10	0 35	88
30	S	4th S. in Lent.	5 43	4 41	42¼	6 28	5 21	10 35	28¼	3 58		27		1 0	1 20	89
31	M	[Mid-Lent S.	5 41	4 23	42½	6 30	5 43	11 18	32¼	5 4		28		1 35	1 55	90

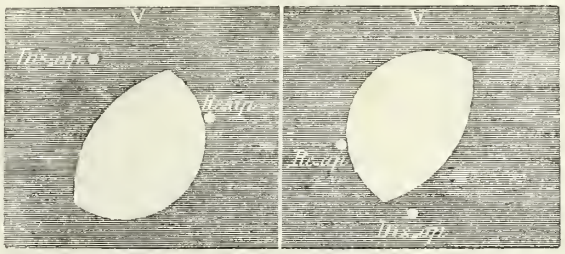
MARCH.

The Sun is situated south of the Equator till the 20th, and north of the Equator from the 21st. He is in the sign Pisces till the 21st, having been in that sign 29 days 23 hours and 56 minutes. On the 21st, at 4h. 56m. A.M., he enters the sign Aries (the Ram), and Spring commences. On the 1st day he is 94,186,000 miles distant from the Earth. He rises on the 3rd at the E. by S., and on the 21st at the E., and sets on the same days at the W. by S. and W. points of the horizon.

The Moon is in the constellation Aquarius till the 3rd, on which day she enters Pisces; on the 6th, Cetus; on the 7th, Aries; on the 8th, Taurus; on the 11th, Orion and Gemini; on the 13th, Cancer; on the 15th, Leo; on the 17th, Virgo; on the 20th, Libra; on the 21st, Scorpio; on the 22nd, Ophiuchus; on the 24th, Sagittarius; on the 26th, Capricornus; on the 28th, Aquarius; and Pisces on the 30th.

She is above the horizon when the Sun is below, during the morning hours from the 13th to the 23rd, and during the evening hours from the 2nd to the 15th.

OCCULTATION OF NU GEMINORUM BY THE MOON, MARCH 12, 1851, AS SEEN THROUGH A TELESCOPE WHICH



Does not invert. Does invert.

The star will disappear at the dark limb of the Moon at 0h. 48m., and re-appear at the bright limb at 1h. 27m. in the morning.

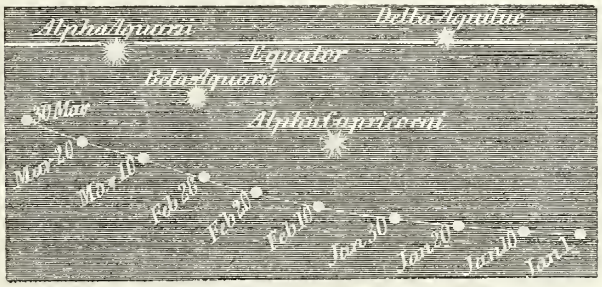
She is situated S. of the Equator till the 5th; is at her greatest north declination on the 12th; is on the Equator on the 19th; and at her extreme south declination on the 25th.

She is near Satura and Uranus on the 6th; Jupiter on the 19th; Venus on the 28th; and Mars on the 30th.

Mercury is in the constellation Capricornus till the 5th; in Aquarius from the 6th to the 18th; and in Pisces from the 19th.

He rises on the 9th, at the E.S.E.; on the 20th, at the E. by S.; and on the 28th, at the E. point of the horizon; and before the Sun till the 27th. He sets before the Sun sets throughout the month. His time of rising precedes that of the Sun by 36 minutes on the first day, and which interval gradually decreases, till, on the 28th, the planet and Sun rise at the same time. The planet is not favourably situated for observation during this month. He is moving eastward among the stars.

PATH OF MARS FROM JANUARY 1 TO MARCH 30, 1851.



Scale, 24 degrees to one inch.

Venus is in the constellation Sagittarius till the 3rd; in Capricornus from the 5th to the 16th; and in Aquarius from the 17th to the end of the month.

She is a morning star, and rises on the 1st at 4h. 42m.; and on the last day, at 4h. 28m.: on the former day, midway between the S.E. by E. and the E.S.E.; and on the last day, near the E.S.E. point of the horizon. She is moving eastward among the stars, and is near the Moon on the 28th.

Mars is in the constellation Capricornus till the 9th; and in Aquarius from the 10th to the end of the month.

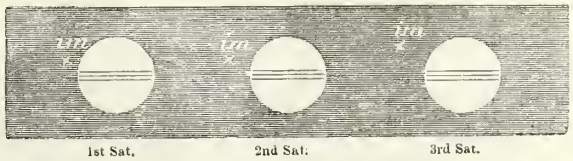
He rises on the 1st, at 6h. 7m. A.M.; and on the last day, at 4h. 55m. A.M.; near the E.S.E. on the 8th; and near the E. by S. at the end of the month; but he is still unfavourably situated for observation. He is moving eastward among the stars, and is near the Moon on the 30th.

Jupiter is in the constellation Virgo throughout the month.

He is visible throughout the night; and rises on the 1st at 9h. 20m. P.M.; and on the last day, at 7h. 5m. P.M.; at the E. by S. point of the horizon. He moves slowly westward among the stars, and is near the Moon on the 19th. He souths at an altitude of 31¾° on the 15th. (For his path in the heavens, and relative position to large stars near him, see the diagram in June.)

Jupiter's Satellites.—Several eclipses of the 1st, 2nd, and 3rd Satellites will be visible. The relative position of the Satellites to Jupiter, at the times of the eclipses, is shown in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION.



Saturn is in the constellation Pisces throughout the month.

He is an evening star, and sets on the 1st at 9h. 7m. P.M.; and on the last day, at 7h. 29m. P.M.; near the W. by N. point of the horizon. He moves slowly eastward among the stars, and is near the Moon on the 6th. His path in the heavens is shown in the diagram in the month of November.

Uranus is in the constellation Cetus throughout the month.

He sets on the 18th at 9h. 12m. P.M. He souths on the 15th at 2h. 16m. P.M.

Neptune rises and sets nearly at the same times as the Sun, and is not visible.

JANUARY.

(*Continued from page* 7.)

Saturn is in the constellation Cetus till the 26th, and in Pisces from the 27th till the end of the month.

He is an evening star, and sets at 35 minutes after midnight on the 1st; and on the last day, at 10h. 45m. P.M., midway between the W. and W. by N. points of the horizon.

Uranus is in the constellation Pisces throughout the month.

He sets at about 4° N. of W. by N. on the 1st, at 1h. 53m. A.M.; and on the last day at 11h. 54m. P.M. He souths on the 15th at 6h. P.M.

Neptune sets on the 1st at 8h. 56m. P.M., and on the 15th at 8h. 4m. P.M., midway between the W. by S. and the W.S.W. points of the horizon.

FEBRUARY.

(*Continued from page* 9.)

Jupiter's Satellites.—Several eclipses of the 1st, 2nd, and 3rd are visible. The relative position of the satellite to Jupiter at the moment of eclipse is shown in the diagram in page 9, as viewed through an inverting telescope.

Saturn is in the constellation Pisces throughout the month. He is an evening star, and sets on the 1st at 10. 41m. P.M., and on the last day at 9h. 11m. P.M., nearly midway between the W. and the W. by N. points of the horizon. He moves slowly eastward among the stars, and is near the Moon on the 6th. For his path in the heavens, see the diagram in November.

Uranus is in the constellation Pisces till the 9th, and in Cetus on the 10th. He sets on the 1st at 11h. 50m. P.M.; and on the last day at 10h. 8m. P.M. He souths on the 15th at 4h. 1m. P.M.

Neptune sets on the 1st at 6h. 57m., and on the 15th at 6h. 7m. P.M., midway between the W. by S. and the W.S.W. points of the horizon.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 45	9 6	10 44	2 51	2 37	
6	10 55	9 8	10 39	2 30	2 20	11 42
11	11 6	9 10	10 35	2 5	2 2	11 23
16	11 18	9 13	10 31	1 48	1 45	11 4
21	11 31	9 16	10 26	1 26	1 27	10 45
26	11 48	9 18	10 21	1 4	1 10	10 26
31	At noon.	9 21	10 16	0 42	0 52	10 7

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.	2nd Sat. Im. I.	2nd Sat. Emer. E.
D. H. M.	D. H. M.	
4 1 39 A.M.	8 10 31 P.M.	I.
11 3 32 A.M.	16 1 5 A.M.	I.
12 10 1 P.M.	23 3 40 A.M.	I.
18 5 26 A.M.		
19 11 54 P.M.	3rd Sat.	
27 1 48 A.M.		
28 8 16 P.M.	9 9 31 P.M.	I.
	10 0 3 A.M.	E.
	17 1 29 A.M.	I.
	24 5 28 A.M.	I.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
A star	4	7 8 43 P.M.	Dark	7° S. &
		7 9 42 P.M.	Bright	70° N.
63 Tauri	6	9 6 56 P.M.	Dark	10° S. &
		9 7 48 P.M.	Bright	57° N.
Nu Geminorum	4	12 0 48 A.M.	Dark	11° N. &
		12 1 27 A.M.	Bright	72° N.
d Cancri	6	13 9 21 P.M.	Dark	20° N. &
		13 10 10 P.M.	Bright	90° N.
Theta Cancri	5½	14 1 10 A.M.	Dark	16° N. &
		14 2 6 A.M.	Bright	96° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

New Moon ..	3d.	1h. 15m.	A.M.
First Quarter	10	9 45	P.M.
Full Moon ..	17	1 19	P.M.
Last Quarter	24	1 26	P.M.
Apogee ..	1	3	P.M.
Perigee ..	16	At Noon.	
Apogee ..	28	11	P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination South.	Jupiter Right Ascension	Jupiter Declination South.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′
1	21h. 20m	17° 12′	19h. 40m	18° 46′	21h. 18m	16° 51′	13h. 24m	7° 15′	1h. 12m	5° 11′	1h. 44m	10° 10′	22h. 36m	9° 42
6	21 50	15 13	20 2	18 15	21 34	15 40	13 23	7 5	1 14	5 25	1 44	10 15	22 36	9 38
11	22 20	12 43	20 24	17 32	21 49	14 24	13 21	6 55	1 17	5 38	1 45	10 20	22 37	9 34
16	22 52	9 41	20 47	16 37	22 7	12 49	13 20	6 43	1 19	5 55	1 46	10 26	22 37	9 30
21	23 24	6 8	21 9	15 30	22 25	11 9	13 18	6 30	1 21	6 6	1 47	10 31	22 38	9 26
26	23 58	2 7	21 32	14 11	22 34	10 17	13 15	6 16	1 2	6 20	1 48	10 37	22 39	9 22

MARCH.

The cock is crowing, the stream is flowing,
The small birds twitter, the lake doth glitter,
  The green fields sleep in the sun.
The oldest and youngest are at work with the strongest;
The cattle are grazing, their heads never raising:
  There are forty feeding like one! WORDSWORTH.

MARCH is very beautifully and graphically described by our late Poet Laureate, Wordsworth, in the above lines; nor is the exquisite breezy Engraving which heads the verses less true to nature; you can almost hear the piping March wind whistling through the trees and the rents of the old mill sails. We could almost fancy that the talented Artist had had a stanza of our own in his "mind's eye" when he drew this exquisite sketch; but, on looking at the verse again, we find our description is too early in the morning for the present scene, neither have we the wagon, and the figure which appears all but blown "off his legs" in the Engraving. Here, however, are the verses, which we wrote ten long years ago:—

On the far sky leans the old ruined mill,
  Through its rent sails the broken sunbeams glow
Gilding the trees that belt the lower hill,
  And the old thorns which on its summit grow;
  Only the reedy marsh that sleeps below,
With its dwarf bushes, is concealed from view.
  And now a struggling thorn its head doth show
Another half shakes off the misty blue,
Just where the dusty gold streams through the heavy dew
And there the hidden river lingering dreams,
  You scarce can see the banks which round it lie.
That wither'd trunk, a tree or shepherd seems,
  For so the light, or fancy, strikes the eye;
  Even the very sheep which graze hard by,
So blend their fleeces with the misty haze,
  They look like clouds dropp'd from the unsunn'd sky,
Ere morning o'er the eastern hill did blaze:
The vision fades as they move further on to graze.

In spite of the almost numberless pages we have written on the approach of spring, the subject seems inexhaustible; for the flowers that come are new flowers, although from the same bulbs and roots, and we still fancy that they never looked so beautiful before. If we greet them not with this feeling, we look upon them as old and very dear friends which have been long absent, and which are endeared to us all the more through this separation. Even the very bees, when they first come out, during the fine days of this month, fly around the flowers "as if they loved them," and seem to murmur into their cups sounds expressive of recognition.

What delight does the first appearance of young buds bring to the heart! When we grow old, we remember the eagerness with which we looked for Spring in our younger days; when, day after day, we watched the green buds growing larger on the hawthorn, and knew that before long we should be able to gather the bunchy blossoms of the sweet-smelling May; when we went peeping into every dark hedge for that darker substance in which the "sky-stained" eggs of the hedge-sparrows were sure to be found. These were amongst the many delights which come with Spring, and in which memory still finds happiness, as we sit with her brooding over past scenes.

If the passage which follows has ever before met the eye of my readers in my "Book of Spring," I am sure they will pardon me for again introducing it, for the sake of the stamp of truth it bears, and the earnest feeling with which I must have written it. It was originally addressed to boys, and my heart must again have wandered to my old companions when I drew this picture of my boyish haunts and boyish feelings. Death has been busy there since I wrote the following; and now, in the beautiful lines of T. K. Hervey (quoted from recollection, and perhaps not correctly)—

Memory, when she names that vale,
Speaketh low and looketh pale;
And pale Regret, with unbound hair,
Sits ever like a mourner there!

Yet here memory contradicteth the feeling; but when I had written what your eye, reader, will in another minute be dwelling upon, the gloomy shadow of death had not settled so harshly down upon the landscape as it hath since done.

Happy were the days we spent in the primrose season of Spring, in rambling down Humble-car-lane, through Lea-marshes, in the bend of the old river Trent, which Shakspeare has described so truly in the quarrel between Hotspur and Glendower, up Pingle-hill, and Donble-hill, and Foxby-lane, away to Leawood and White's-wood, or through the long plantation, Caister-wood, Castle Hills, Thonock, and Corringham-skroggs, the wildest scene of all. Or, perchance, we crossed Gainsborough-bridge, and went along the "Ramper" by the Delf, or turned off at Cape's old ropery into the marshes, elbowing our way to Bole, or Sawnby, or Wheatly; or it might be keeping on the hanling-path by the river banks, beside osier-holts and wild river foregrounds of feathery reeds, and green rushes, and tall armies of flags which were ever waving to and fro; or, turning our faces towards the broad Humber, and leaving Beckingham to the

left, we went on towards Parnell's osier-holt (so called from the dear old doctor—one of the last gentlemen we remember wearing a pig-tail), where we stood leaning over the parapet of the crumbling brick bridge, and watching the fish as they went in and out through the old weather-stained sluice gates. Even now I feel as if I could leap up from my wearisome armed-chair, if I were nearer those beloved spots, and visit them all again between sunrise and sunset, without once feeling fatigued, and hunt every familiar hedge and bush, as I have many a time done a quarter of a century ago.

My heart, whilst ever it beats, can never grow old or cold, or cease to pant and yearn for those delightful spots which are ever green with the pleasant memories of my boyish days; for I believe that they will never cease to be covered in Spring and Summer with milk-white daisies and sun-stained buttercups, and ever hemmed in with pleasant green hedges powdered and perfumed with the pearl-dyed blossoms of May; I can never believe but what the river sings and murmurs as sweetly through its winding banks as it did when I a boy angled in its bright rapid waters; and that those silver-sounding church bells ring as sweetly from that grey and weather-beaten old Norman tower, as when I a child shaped words to their music, and which I fondly fancied every babbling hill and valley repeated. I can never think that the water-flags around Cavendish-hog will in Spring ever be without a reed-sparrow's nest, or that the hedge-sparrows will ever cease to lay their blue eggs in the tall hedges of Humble-car; I believe that the throstles will never forsake the dark firs in the long plantation, nor the linnet cease to build in the gorse-bushes beyond it.

Though I have grown older now, the fond remembrance that is ever rooted in the haunts of my childhood is still young, and dances its green leaves in the wind and sunshine as gaily as if it were still a sapling, with its tender bark uninjured by the rough rubs of the passing world. I would gather all the birds that ever sang around me in my boyish days, if I could, and they would remain my companions without repining or complaining: then I could fancy when they sang that they were telling me all about the old woods and lanes we wandered through, long, long years agone; and sometimes we should seem very glad, and at others very sorrowful together, and close our eyes in the same twilight, and dream about the same old familiar scenes, for we should feel all alike prisoners, they and I—longing for the same Spring and Summer-green, and sending many a sigh after things that had for ever ceased to be. And yet, not so! for even now I can look, with closed eyes, through the dim avenues of old years, down the grey twilight of time: for nothing in that hazy past is wholly dark; even the sinking sunset is gilded over with pleasant memories, into which the spirit steals forth in sleep, to visit those old haunts and bring me back tidings about the buds and flowers that are blowing, to comfort me when I awaken; for Memory, like the island in Shakspeare's "Tempest,"

> Is full of noises,
> Sounds, and sweet airs, that give delight, and hurt not.

Lest we should pall our readers with too long a description of rural scenery, we will attempt to draw another picture of country sports, which more properly belongs to Winter, although still followed in the present month, and that is Rabbit Hunting with the assistance of ferrets. No animal is so useful in driving the rabbit from its burrow as the ferret, providing the ferret is muzzled; if not, it will gorge itself with the blood of the rabbits, and sleep in the bottom of the burrow until aroused by the call of hunger. Some sew up the mouths of the ferrets, while employed in driving out the rabbits; but this is an unnecessary and cruel precaution, as the following plain and simple directions for muzzling or coping the ferret will prove—we copy it from the "Dictionary of Sports:"—"A piece of soft string, not too thin, is tied round the neck of the ferret, close to the head, leaving two longish ends; another piece of string is tied round the under jaw, passing it under the tongue, and brought round over the upper jaw, and tied there, leaving the ends long. This will keep the mouth closed. The four ends are then brought together, and tied in one knot on the top of the head, which makes all safe from slipping. It gives the animal no pain, as it appears to hunt as eagerly as without a muzzle."

The female ferret sometimes devours her young (a brood of which generally numbers from six to nine), of which she has two broods a year.

Few are aware what a plague the rabbit would be, unless kept under. Like the locusts of old, it would eat up "every green thing," were it not destroyed by man, and preyed upon by both birds and beasts. To see the havoc the rabbit makes amongst even the hardy gorse, one need not journey further from London than Epping Forest. But it is amongst the young corn and young trees that their destructive powers are most serious, as they devour the one and bark the other, and prevent it from ever becoming valuable as timber. A rabbit warren is a perfect subterraneous town, full of hollow and bending streets, through the mazes of which the lithe-bodied ferret-weasel is well adapted to wind its way, and drive out the destructive populace, when their inroads on the neighbouring fields become serious. It is on record that a town in Spain was once undermined and destroyed through their burrows. Their favourite time of feeding is in the evening twilight, though they may be seen abroad during all hours of the day. As for their fecundity, Daniel, in his "Rural Sports," says—"Rabbits will breed at six months old, bear seven times annually, and bring five young ones each time. Supposing this to happen regularly during the space of four years, and that three of the five young at each kindle are females, the increase will be 478,062. The calculation has been made from eight young at each of the seven kindles, amounting to 1,274,840; but that is much too high, for the wild rabbit was never known to have eight at two successive kindles. Under the first statement, being overstocked with these animals might justly be feared; but man, birds, and beasts of prey make great devastation among them."

The rabbit, like most animals that burrow in the earth, has more than one entrance and exit to his house, and it may be readily imagined how unceremoniously he hastens to escape from his front or back-door when the ferret is in possession. That is the moment for the sportsman to take aim, for the dart of no animal is so quick as that of the rabbit; the gun must be ready raised and the finger on the trigger when he appears, or he is across the path and off amongst the windings of the furze-bushes in a twinkling, and gone through runs so small that no dog can follow him. One writer says:—

> More difficult than the hare to hit,
> They frequently appear to flit
> Like shadows past one.

Care must be also taken not to hit the ferret, which is likely enough to be close upon the scent of the rabbit.

If there is one animal more than another that ought to be the common property of all who choose to capture it, it is the rabbit, which should ever remain the poor man's game, without the interference of any law. We speak, be it remembered, of old, open forest-land, heaths, moors, and commons; for we consider a private rabbit warren as much the property of the owner as a flock of sheep. Hear what the late witty canon of St. Paul's, the Rev. Sydney Smith, has to say on these matters—a man whose spirit still walks the earth in his works, and is ever abroad doing good:—

"We really cannot believe that all our rural mansions would be deserted, although no game was to be found in their neighbourhood. Some come into the country for health, some for quiet, for agriculture, for economy, from attachment to family estates, from love of retirement, from the necessity of keeping up provincial interests, and from a vast variety of causes. Partridges and pheasants, though they form nine-tenths of human motives, still leave a small residue, which may be classed under some other head. Neither are a great proportion of those whom the love of shooting brings into the country, of the smallest value or importance to the country. A Colonel of the Guards, the second son just entered at Oxford, three diners-out from Piccadilly, Major Rook, Lord John, Lord Charles, the Colonel of the regiment quartered at the neighbouring town, two Irish Peers, and a German Baron—if all this honourable company proceed, with fustian jackets, dog whistles, and chemical inventions, to a solemn destruction of pheasants, how is the country benefited by their presence? or how would earth, air, or sea be injured by their annihilation? There are certainly many valuable men brought into the country by a love of shooting, who, coming there for that purpose, are useful for many better purposes; but a vast multitude of shooters are of no more service to the country than the ramrod which condenses the charge, or the barrel which contains it. We do not deny that the annihilation of the Game-Laws would thin the aristocratic population of the country, but it would not thin that population so much as is contended; and the loss of many persons so banished, would be a good rather than a misfortune. At all events, we cannot at all comprehend the policy of alluring the better classes of society into the country by the temptation of petty tyranny and injustice, or of a monopoly in sports. How absurd it would be to offer to the higher orders the exclusive use of peaches, nectarines, and apricots, as the premium of rustication; to put vast quantities of men into prison as apricot-eaters, apricot-buyers, and apricot-sellers; to appoint a regular day for beginning to eat, and another for leaving off; to have a Lord of the Manor for greengages, and to inflict a penalty of five pounds on the unqualified eater of the gage! And yet the privilege of shooting a set of wild poultry is stated to be the bonus for the residence of country gentlemen! As far as the immense advantage can be obtained without the sacrifice of justice and reason, well and good; but we would not oppress any order of society, or violate right and wrong, to obtain any population of squires, however dense. It is the grossest of all absurdities to say, that the present state of the law is absurd and unjust, but it must not be altered, because the alteration would drive gentlemen out of the country. If gentlemen cannot breathe fresh air without injustice, let them putrefy in Cranbourne-alley. Make just laws, and let squires live and die where they please." (Vol. II., p. 56—57, edit. 1840.)

What misery have we witnessed that sprang from these Game-Laws! miseries only known to such as have lived in the country, and looked upon the bitter blood which they have engendered. We have seen the bleeding face of the dead man, brought home at midnight from the woods, a victim offered up to these disgraceful laws—have heard the shriek of the young widow, and the hopeless wailing of the fatherless children: these things we have seen with our own eyes, and heard with our own ears, and felt that it would scarcely be murder to avenge the death of the poor poacher, who but went out to provide his family with food. Even we, peace-loving men, felt this, while looking upon the deeds done under the sanction of these blood-stained laws. Upon the grey old tombstones of the village churchyard have we stood and wept, as we have in turn seen poacher and gamekeeper consigned to an untimely grave—men who a few days before were ruddy with health and strength, murdered in a midnight brawl while struggling for the possession of a poor hare. This have we witnessed in the nineteenth century.

Alas! the low vallies and sloping hills and waving woods of green England are not what they seem; amid them death-blows are dealt at midnight, and dying groans heard in lonely coverts: the gloomy gallows or the forbidding prison rise up amid the landscape, where the victims swing or mean away their days—sufferers for the preservation of worthless game. Would that we could blot out these laws for ever from our statute-books, and that they might only be remembered amongst the thousand of barbarous customs abolished centuries ago.

APRIL.

LOUIS NAPOLEON, PRESIDENT OF FRANCE, BORN APRIL 20, 1808; ELECTED DECEMBER 20, 1848.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'clock.	SUN. Height above Horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon	MOON. Height above Horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 3h. 4h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 8h. 9h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Tu	All Fools Day	5 38	4 5	43	6 31	6 2	At noon	36¾	6 9		○		2 10	2 25	91
2	W	Day breaks 3h 35m	5 36	3 47	43¼	6 33	6 22	0 43	41⅓	7 15		1		2 40	2 55	92
3	Th	Rich. Bp. Chich.	5 34	3 29	43¾	6 36	6 43	1 27	46	8 23		2		3 10	3 25	93
4	F	*St. Ambrose*	5 31	3 11	44	6 37	7 6	2 13	50	9 33		3		3 40	3 55	94
5	S	Twilight ends 8h 41m	5 29	2 53	44½	6 38	7 32	3 2	53¾	10 43		4		4 15	4 30	95
6	S	5TH S. in LENT.	5 27	2 35	44¾	6 40	8 4	3 53	56¼	11 51		5		4 45	5 5	96
7	M	[Old Lady Day	5 24	2 18	45¼	6 41	8 44	4 47	58¼	Morning.		6		5 20	5 40	97
8	Tu	Fire Insur. due	5 22	2 1	45½	6 43	9 32	5 43	58¼	0 55		7		6 0	6 25	98
9	W	Day increased 5h 40m	5 20	1 44	46	6 44	10 31	6 40	58¼	1 54		☽		6 50	7 20	99
10	Th	Length of day 13h 27m	5 18	1 27	46¼	6 45	11 39	7 38	56¼	2 45		9		7 55	8 35	100
11	F	Camb. Term ends	5 15	1 11	46¾	6 47	Afternoon	8 35	52¾	3 27		10		9 20	10 5	101
12	S	Oxford T. ends	5 13	0 54	47	6 48	2 14	9 30	48½	4 1		11		10 50	11 30	102
13	S	6TH S. in LENT.	5 11	0 39	47½	6 50	3 38	10 25	43¼	4 30		12		No Tide.	At Noon.	103
14	M	[PALM SUN.	5 9	0 23	47¾	6 52	5 0	11 18	37¾	4 57		13		0 35	1 0	104
15	Tu	Easter Term beg.	5 7	0 7	48	6 54	6 23	Morning.	—	5 21		●		1 25	1 45	105
16	W	Regulus souths 8h 23m P.M.	5 5	Before 12 o'clock.	48½	6 55	7 42	0 11	32¼	5 47		15		2 5	2 30	106
17	Th	Maunday Thurs.	5 2	0 22	48¾	6 57	9 2	1 3	27¼	6 12		16		2 50	3 10	107
18	F	GOOD FRIDAY	5 0	0 36	49¼	6 59	10 16	1 56	23	6 41		17		3 30	3 50	108
19	S	*Alphage*	4 57	0 50	49½	7 1	11 25	2 49	19½	7 16		18		4 10	4 30	109
20	S	EASTER SUNDAY	4 56	1 4	50	7 2	Morning.	3 43	16⅓	7 58		19		4 50	5 10	110
21	M	Easter Monday	4 55	1 17	50¼	7 4	0 26	4 35	15⅓	8 43		20		5 30	5 50	111
22	Tu	Easter Tuesday	4 53	1 29	50½	7 6	1 17	5 26	16¾	9 38		21		6 15	6 40	112
23	W	*St George*	4 51	1 41	51	7 8	2 0	6 15	18	10 35		☾		7 0	7 30	113
24	Th	Beta Leonis souths 9h 32m	4 49	1 53	51¼	7 10	2 34	7 2	20	11 36		23		8 5	8 50	114
25	F	*St. Mark.* Prs.	4 47	2 4	51½	7 11	3 3	7 48	23	Afternoon		24		9 30	10 10	115
26	S	Alice M. born. Duch. Gloucester born	4 45	2 14	52	7 13	3 26	8 31	26½	1 45		25		10 45	11 20	116
27	S	1ST S. aft EAST.	4 43	2 24	52¼	7 14	3 48	9 14	30½	2 50		26		11 55	No Tide	117
28	M	[LOW SUNDAY	4 41	2 34	52½	7 16	4 8	9 57	35	3 56		27		0 20	0 40	118
29	Tu	Length of day 14h 38m	4 39	2 43	52¾	7 17	4 28	10 40	39¾	5 4		28		1 0	1 20	119
30	W	Oxford T. begins	4 37	2 51	53¼	7 19	4 48	11 23	44¼	6 11		29		1 35	1 55	120

APRIL.

The Sun is situated north of the Equator, and is moving north. On the 20th, at 5h. 3m. P.M., he passes from the sign Aries to that of Taurus (the Bull), having been in the former sign 30 days, 12 hours, 7 minutes. On the 1st he is 94,998,000 miles distant from the Earth. He rises on the 8th at the E. by N.; on the 28th at the E.N.E.; and sets on the same days at the W. by N. and W.N.W. points of the horizon.

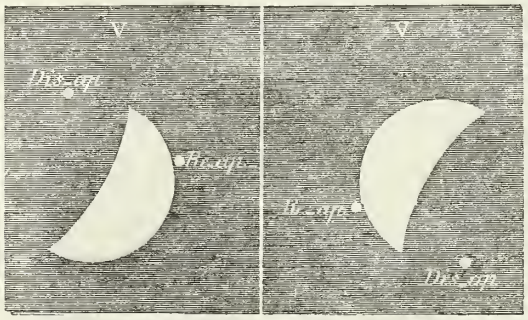
The Moon is in the constellation Pisces till the 3rd, on which day she enters Cetus; on the 3rd, Aries; on the 4th, Taurus; on the 7th, Orion; on the 8th, Gemini; on the 9th, Cancer; on the 11th, Leo; on the 13th, Virgo; on the 15th, Libra; on the 18th, Scorpio; on the 20th, Sagittarius; on the 23rd, Capricornus; on the 25th, Aquarius; on the 27th, Pisces; on the 30th, Cetus; and on the 31st, Aries.

She is above the horizon when the Sun is below, during the morning hours from the 10th to the 23rd, and during the evening hours from the 2nd to the 15th.

She is on the Equator on the 1st; at her greatest north declination on the 8th; again on the Equator on the 14th; is at her extreme south declination on the 21st; and a third time on the Equator on the 29th.

She is near Mercury on the 1st; Saturn on the 2nd; Uranus on the 3rd; Jupiter on the 15th; Venus on the 27th; Mars on the 28th; Saturn and Uranus on the 30th.

OCCULTATION OF ZETA GEMINORUM BY THE MOON, APRIL 8, 1851, AS SEEN THROUGH A TELESCOPE WHICH



Does not invert. Does Invert.

The star disappears at the dark limb of the Moon at 9h. 6m. P.M., and reappears at the bright limb at 9h. 48m. P.M.

Mercury is in the constellation Pisces till the 9th; in Aries from the 10th; and in Taurus from the 22nd.

He rises after the Sun all the month, and is not, therefore, visible in the morning. He sets at the same time as the Sun on the 2nd, and after the Sun from the 3rd. On the 9th he sets at 7h. 33m.; on the 12th at 7h. 57m.; on the 15th at 8h. 21m.; on the 18th at 8h. 42m.; on the 21st at 9h. 1m.; on the 24th at 9h. 16m.; on the 27th at 9h. 24m.; and, on the last day, at 9h. 28m. The Sun precedes the setting of the planet by 1h. 27m. on the 15th; by 1h. 43m. on the 18th; by 2h. 6m. on the 24th; by 2h. 10m. on the 27th; and by 2h. 9m. on the last day. These intervals of time are the greatest in the year between the times of the Sun and planet setting; and the time from the 24th day is the best in the year for observing the planet, which can be readily seen by the naked eye. He sets on the 5th at W. by N.; on the 13th at W.N.W.; and, on the 24th, at the N.W. by N. points of the horizon. He is moving slowly eastward among the stars throughout the month; is near the Moon on the 1st, and Saturn on the 7th; is in Perihelion on the 12th; is near the Pleiades on the 28th; and reaches his greatest east elongation on the 28th. His path in the heavens and relative position to stars in his neighbourhood are shown in the diagram in June.

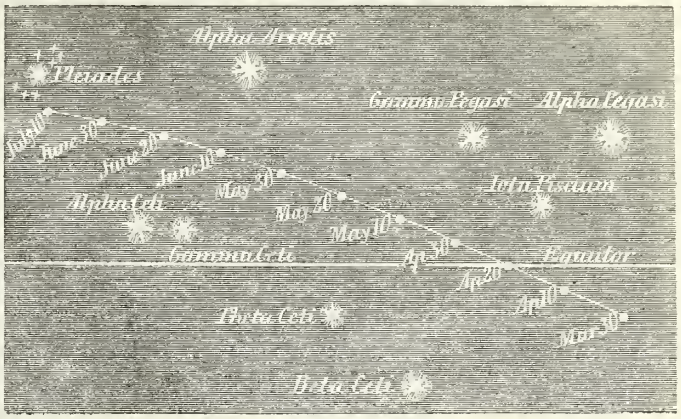
Venus is in the constellation Aquarius till the 16th, and in Pisces from the 17th to the end of the month.

She is a morning star, and rises on the 1st at 4h. 28m.; and on the last day at 3h. 36m.; near the E.S.E. on the 1st day; near the E. by S. on the 16th; and near the E. point of the horizon on the last day. She is moving eastward among the stars, and is near the Moon on the 27th. Her path in the heavens during this month, and her relative position to large stars near her, are shewn in the diagram in next month.

Mars is in the constellation Aquarius till the 6th, and in Pisces from the 7th to the end of the month.

He is a morning star, and rises on the 1st at 4h. 53m. P.M.; and, on the last day, at 3h. 30m. A.M.; at the E. by S. on the 6th, and the E. on the 28th. He is moving eastward among the stars, and is near the Moon on the 28th. His path in the heavens during this month, and relative position to stars situated near him, are shown in the annexed diagram.

PATH OF MARS FROM MARCH 30 TO JULY 10, 1851.



Scale, 24 degrees to one inch.

Jupiter is in the constellation Virgo throughout the month. He is visible throughout the night, and rises on the 6th at 6h. 37m. P.M.; and on the last day at 4h. 47m. P.M., between the E. and E. by S. points of the horizon. He moves slowly westward among the stars, and is near the Moon on the 15th. He souths at an altitude of 33½° on the 15th. His path in the heavens and relative position to large stars is shown in the diagram in June.

Jupiter's Satellites.—Several eclipses of the first, second, and third satellites are visible. The relative position of the satellites to Jupiter at the moment of eclipse is shown in the annexed diagram, as seen through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF EMERSION.

1st Sat. 2nd Sat. 3rd Sat.

Saturn is in the constellation Pisces till the 29th, and in Cetus on the 30th.

He rises and sets at nearly the same time as the Sun, and is not favourably situated for observation.

Uranus is in the constellation Cetus till the 12th; and in Aries on the 13th.

He rises, souths, and sets at nearly the same time as the Sun, and is not favourably situated for observation.

Neptune rises at 4h. 50m. A.M. on the 1st, and at 3h. 56m. A.M. on the 15th, midway between the E. by S. and the E.S.E. points of the horizon.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury		Venus.		Mars.		Jupiter.		Saturn.		Neptune.	
	Afternoon		Morning.		Morning.		Morning.		Afternoon		Morning.	
	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
1	0	4	9	21	10	15	0	38	0	49	10	6
6	0	22	9	24	10	10	0	16	0	32	9	47
11	0	40	9	26	10	4	Aftern.		0	14	9	28
16	0	57	9	29	9	59	11	27	Morning		9	9
21	1	10	9	31	9	54	11	5	11	40	8	49
26	1	17	9	33	9	48	10	44	11	22	8	30
30	1	17	9	34	9	44	10	26	11	9	8	12

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Im. I	Emer. E.	Eclipses of 2nd Sat. Emersion.
D. H. M.		D. H. M.
3 3 41 A.M.	I.	2 7 33 P.M.
4 10 10 P.M.	I.	10 0 46 A.M.
12 2 13 A.M.	E.	17 3 22 A.M.
12 8 41 P.M.	E.	27 7 16 P.M.
19 4 6 A.M.	E.	3rd Sat.
20 10 35 P.M.	E.	14 7 49 P.M.
28 0 29 A.M.	E.	21 11 47 P.M.
		29 3 44 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re appearance of the Star.	At which limb of the Moon	Between what Latitudes visible.
		D. H. M.		
m Tauri	5	6 8 11 P.M.	Dark	9° N. &
		6 9 14 P.M.	Bright	80° N
Chi 4 Orionis	5	7 8 8 P.M.	Dark	11° N. &
		7 9 14 P.M.	Bright	77° N.
Zeta Geminorum	4	8 9 6 P.M.	Dark	6° N. &
		8 9 48 P.M.	Bright	63° N
b Virginis	5	13 10 49 P.M.	Dark	7° N. &
		13 11 59 P.M.	Bright	90° N.
Eta Libræ	4	17 11 36 P.M.	Bright	4° S. &
		18 0 23 A.M.	Dark	68° N.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee) from the Earth in each Lunation.

					Days of the Month.
New Moon ..	1d.	6h.	33m.	P.M.	1
First Quarter	9	7	2	A.M.	6
Full Moon ..	15	10	35	P.M.	11
Last Quarter	23	6	58	A.M.	16
Perigee ..	13	6		P.M.	21
Apogee ..	25	4		P.M.	26

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Mercury.		Venus.		Mars.		Jupiter.		Saturn.		Uranus.		Neptune.	
Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination South	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination South
0h. 41m	3° 15′	21h. 58m	12° 22′	22h. 52m	8° 32′	13h. 13m	5° 59′	1h. 26m	6° 37′	1h. 49m	10° 44′	22h 40m	9° 18′
1 18	7 57	22 21	10 42	23 6	7 2	13 10	5 45	1 28	6 51	1 50	10 50	22 40	9 15
1 56	12 33	22 43	8 52	23 21	5 31	13 8	5 30	1 31	7 5	1 52	10 55	22 41	9 12
2 33	16 36	23 5	6 56	23 35	3 59	13 6	5 16	1 33	7 19	1 53	11 2	22 41	9 9
3 5	19 45	23 27	4 54	23 49	2 27	13 3	5 2	1 36	7 33	1 54	11 8	22 42	9 6
3 32	21 51	23 48	2 47	0 4	0 54	13 1	4 49	1 38	7 47	1 55	11 14	22 42	9 3

APRIL.

Emblem of life! see changeful April sail
In varying vest along the shadowy skies,
Now bidding Summer's softest zephyrs rise,
Anon recalling Winter's stormy gale,
And pouring from the cloud her sudden hail;
Then smiling through the tear that dims her eyes,
While Iris with her braid the welkin dyes,
Promise of sunshine, not so prone to fail.—HENRY KIRKE WHITE.

APRIL has ever been associated in our mind with Angling, from our boyish days. No sooner did the silvery down show itself on the willows, than we hunted up our fishing-tackle, and betook ourselves to our old favourite angling-places in the free and open river Trent, where we had the uninterrupted range of many miles, without any fear of trespassing. The whole river, far as we ever wandered (with the exception of private grounds, that were enclosed), was as free to poor and rich as when it first ran through its green and winding banks after the subsiding of that undated ocean, the ebbing of whose waters are yet visible in the ridges of the hills which on either side hem in the broad valley of the Trent.

Born within a stone-cast of that river, we were anglers in our childhood, and can well remember with what delight we hooked our first bleak on Mortram's wharf, with the farthing willow fishing-rod bought of Tommy Duncan, while as yet we figured in frock and pinafore—for tunics and trousers, and such like Frenchified fal-the-rals were not then known, and we were whipped all at once out of our baby-like free-and-easy costume into all the horrors of tight corduroys, without any intermediate stage of transition: nor have we yet forgotten the first twelve months, during which, although we broke our nails over and over again, we never could for the life of us button them behind. Our first fair stand-up fight was long before we were breeched, because a lubberly boy had, in the presence of our little sweetheart, who was nursing her doll and sucking her thumb at the same time, dared, on account of the petticoats we then wore, to call us "lad-lass." Even at that age we were anglers; and by the time we had attained our seventh year, we were initiated into the mystery of "bottom-lines," and had brought home a pike whose tail draggled on the ground, as horne upon the shoulder of our "giant height." The truth is, a professed fisherman was our next-door neighbour—a man "to the manner horn;" for he obtained his livelihood by fishing in the Trent—and, what with accompanying him, and aided and abetted by his promising son Bob, stealing off at times with his boat and tackle while he was drinking (for he was a thirsty fish), it is not to be wondered at that there was no lad, from the rise of the Trent to its fall in the Humber, who better understood the "gentle art" than ourselves at that early age: as we grew older we realised not the promise of our boyhood.

Fly-fishing we were never able to make much of, and we fear our best efforts never rated higher than "whipping" or "flogging" the water: we could never attain that fine masterly stroke of dropping the artificial fly upon the water, as if it had been a real insect that had mistaken the glassy surface for the green grass, and alighted there of its own accord. To throw the fly on the exact spot fixed upon by the eye of the fisherman, has ever appeared to us a greater accomplishment than to hit the bull's-eye in a target with a rifle, at a distance when the mark scarcely appears larger than a pin's head; such a nice calculation does it require in the former to allow for the wind acting upon the line, which affects not the bullet. As to being able to throw the fly with either hand, that we gave up in hopeless despair; for when we attempted it with the left, it was "over the left" indeed, according to the fullest sense of the Cockney vernacular.

We well remember our early lessons on land, in the art of fly-fishing, in poor old Palmer's garden, and how at the first throw we hooked his inexpressibles, and at the second, while he stood with his mouth open, we threw the fly into it; also, how he danced, and capered, and roared out ten thousand murders; and how we ran for the barber to cut out the hook, and which, when done, left our "master of arts" redder about the gills than ever we saw a salmon. The worst of it was, at the very moment of the disaster, he had so much applauded that particular throw as to call "Strike," which we were in the act of doing when the wind blew the fly into his open mouth, and we did strike to some purpose. He was the largest fish we ever hooked; although we once carried away Miss Ogleton's cap and peruke by a similar throw, much to the annoyance of that middle-aged lady, and greatly to our own astonishment, for we left her pate as bare as a bladder of lard: no one ever after wantoned with her long ringlets.

To attempt a description of all the artificial flies used throughout the year would be as dry and uninteresting a subject to the generality of our readers as if they were to sit down and read a dictionary backwards, by commencing at the end of the definition of each word. It is, in fact, all hackle and cackle, red-dun and dead-dun, oak-fly and choke-fly, grey-lake and may-drake, and leaves the mouth after enunciation as husky as if one had tried the flavour of each; we feel a kind of hairy featheriness about the palate, such as a man feels in a dream when he is busily engaged in breakfasting off the inside of the feather-bed he is sleeping upon. Even that portion of Walton's work dedicated

to this subject we invariably skipped, much as we worshipped the old man's exquisite word-painting and his inimitable sketches of rural scenery. The ingredients which Shakspeare's witches throw into the cauldron in "Macbeth" have ever seemed to us about as "comatable" as many of the materials necessary for the manufacturing of artificial flies, for which it seems indispensable to have—

Eye of newt, and toe of frog,
Wool of bat, and tongue of dog,
Adder's fork, and blindworm's sting,
Lizard's leg, and owlet's wing.

Nay, we are not sure that we did not once miss a singular legacy—namely, a drawer full of hair, wool, and feathers, because we were too dull to learn the art of making properly large March-duns, cream-coloured duns, mealy-white moths, &c., all of which the worthy old fly-fisher bequeathed to another, together with an old stocking filled with bran and spade-ace guineas, because he had more patience than we possessed.

The great essentials for fly-fishing are a sure eye and a true hand, so as to throw the fly upon the exact spot on which the eye has fixed, and these qualities can only be attained by much patience and considerable practice. The fly-fisher must also be able to use either hand, not only to take advantage of the wind from whichever point it may blow, but also to save one hand from tiring, and the wrist from being sprained, as it would be, were all the work to be done by one hand. A beginner should commence practice by throwing against the wind. The instant a fish seizes the fly, he should be struck; for no sooner do his jaws close upon the artificial bait, than he discovers the mistake, and "blows" it out of his mouth, for he no more mistakes the hardness of the hook than we should were we to attempt to bite a stone peach, however much it might deceive the eye. A strike may, however, be so quick as to draw the fly out of his mouth before his jaws have closed, though this, we believe, but rarely happens. "After a fish is struck," says the "Encyclopædia of Rural Sports," "if it be of a tolerable size, immediately throw up the point of the rod, and, if the fish give signs of being a very heavy one, then actually force the butt of it so forward as to carry the point over the shoulder, which will transfer the strain on the line to the elasticities of the joints of the rod; and this direction must be pursued until the fish be sufficiently exhausted for landing: we may also take occasion to caution the angler never to let a fish strike towards the weeds, nor up nor across the stream; but, if possible, down the stream only, keeping his head high up in the current, to tire and drown him. Likewise avoid letting your shadow, as well as that of your rod, fall on the water when fishing."

A salmon weighing fifty-four pounds has been taken in Scotland with an artificial fly, and splendid must have been the tackle to land such a monster, especially if he sulked, and lay like a stone at the bottom of the river, with the hook in his mouth, as he sometimes will after he has been struck, and finds that he cannot escape. There is no help for it then, but to throw in stones, as near as you can to where he lurks, without hitting him. Neither ought a salmon-fisher ever to be without his gaff, or landing-net. "We remember well," says Mr. Blaine, in the work just quoted, "to have seen a gentleman, but unknown to us, who, although he seemed to handle his tackle well, and, indeed, threw a beautiful line, as it is called, yet with single gut he struck, and was playing a very heavy fish, without having either landing-net or gaff-hook. We saw that an hour or two would be spent ere he could be landed without some assistance and much manœuvring. We enjoined him to be patient, in which he acquiesced, and suffered the fish to sulkily settle himself in the bed of the river without disturbance for ten minutes, as though sulking with his sore mouth, and his incapability of swallowing his prey. A few shakes of the line rather roused him, but it was not until some heavy stones were thrown towards his bed that he again got him afloat; the captor drew him in with much judgment, keeping the line stretched on him, but not sufficiently to allow even his flounderings to disengage it. It was now that the fisher saw in full force his negligence in having come out without either gaff or landing-net; indeed, the landing-net would hardly answer his purpose, so much did the banks hang over the water; but, after many efforts, our gaff was fastened into his shoulders, and by its means he was, with our assistance added to that of the angler, safely landed on shore."

But, were we to occupy the whole of the space allotted to the description of the present month to the subject of fly-fishing, we should not be able to convey to our readers a tithe of the information which it is necessary to possess to become a good practitoner in the art; we must, therefore, glance at other matters.

Spring has now really arrived; and, as the song of the skylark is heard in every field, we shall, as a relief to the somewhat prosy article on fly-fishing, insert a poem which we composed twenty years ago, on Bluebell Hill, near Nottingham, on

THE SKYLARK.

Whither away, companion of the sun!
So high this lovely morning? Are those clouds
Of floating silver, which appear to shun
Day's golden eye, thy home? or why, mid shrouds
Of loosen'd light, dost thou pour forth thy song?
Descend, sun-loving bird! nor try thy strength thus long.

Æthereal songster! soaring merrily,
Thy wings keep time to thy rich music's flow,
Which rolls along the sky celestially,
And echoes o'er the hill's wood-waving brow
Along the flood, that back reflects the sky;
And thee, thou warbling speck, deep-mirrored from on high.

And thou hast vanish'd, singing, from my sight;
So must this earth be lost to eyes of thine;
Around thee is illimitable light:
Thou lookest down, and all appears to shine
Bright as above! Thine is a glorious way,
Pavilion'd all around with golden-spreading day.

The broad unbounded sky is all thine own:
The silver-sheeted heaven is thy domain;
No land-mark there, no hand to bring thee down,
Glad Monarch of the blue and starry plain!
To thee is airy space far-stretching given,
The vast unmeasur'd floor of angel-trodden Heaven.

And thou hast gone! perchance, to catch the sound
Of seraph-voices, heard far up the sky,
And wilt return harmonious to the ground;
Then, with new music, taught by those on high,
Ascend again, and carol o'er the bowers,
When the wild-rose waves sweet, and the bee bends the flowers.

Lov'st thou to sing alone above the dews,
Leaving the nightingale to cheer the night,
When rides the moon; chasing the shadowy hues
From the dark trees, and scattering far her light
O'er wood and town—while thou art with the sun,
Looking on hill and vale, where low-voiced rivers run?

I hear thy strain, now thou art nearing earth—
Like quivering aspens moves each fluttering wing;
Rising in glee, thou comest down in mirth:
Hast heard the angels to their Maker sing
The morning hymn, and com'st to teach thy mate
The anthem thou hast brought from heaven's gold-lighted gate?

Lute of the sky! farewell, till I again
Climb these cloud-gazing hills. Thou must not come
To where I dwell, nor pour thy heaven-caught strain
Above the curling of my smoky home.
Others may hear thee—see thee—yet not steal
That joy from thy glad song which it is mine to feel.

Numberless are the beautiful passages scattered over the works of our ancient and modern poets, descriptive of the present month. The alternate cloud and sunshine of this season have furnished them with images of the uncertainty of happiness, the vanity of fleeting pleasure, and the fickleness of all earthly things. The sunshine and showers of April are by them compared to the smiles and tears of woman, and the variableness of the weather to her changing passions—perhaps wrongfully. For our part, we love April, with her fleeting showers, which, falling like golden drops through the sunshine, look as if Spring was scattering millions of yellow flowers upon the earth, or the sun was showering down, from his own golden gardens, seeds for the coming Summer.

April showers
Bring May flowers,

is one of those old couplets which were "household words" with our ancestors—probably, centuries ago; and, from the descriptions of our early poets, we are almost led to conclude that the flowers and leaves of Spring blowed and put forth earlier than they do in the present day. The "backward" springs which we have had of late seems to have struck Coleridge, for, in his matchless poem of "Christobel," he says—

'Tis a month before the month of May,
And Spring comes slowly up this way.

I have, on a former occasion, alluded to the beauty of the morning skies of Spring and Autumn, as being so richly blue, and so variously marbled, when the clouds are scattered like sheep over the downs of heaven, and every hillock by which they seem to rest is stained with the hues of sunrise. I have often fancied, as I have noticed the clustering clouds gathering about the east, that they were humble almsmen, waiting for the approach of the sun, who, as soon as he arose, cast off his garments, and threw his rich drapery of blue and gold and purple and crimson and silver amongst the suppliant clouds, and never deigning to appear twice in the same robes; but that all night long the golden looms of heaven were busy in preparing a new dress for his departure, on each new day—colours which no painter could ever imitate, and robes streaming out in such forms of beauty as no poet was ever yet able to describe. The picture I have here attempted in prose, I long since painted in verse, and here give my readers their choice of the two designs:—

Morning again breaks through the gates of heaven,
And shakes her jewell'd garments on the sky,
Heavy with rosy gold. Aside are driven
The vassal clouds, which bow as she draws nigh,
To catch her scatter'd gems of orient dye,
The pearly ruby which her pathway strews—
Argent and amber, now thrown useless by.
The uncolour'd clouds wear what she doth refuse—
For only once doth Morn her sun-dyed garments use.

Mr. Gale, the celebrated aëronaut, assured me that all these beautiful visions are confined to the earth; that, when he reached an altitude of a mile and a half, he saw none of those richly coloured clouds above him; but that there all was calm and serenely blue, he having then passed through all that painters love to imitate, and poets attempt to describe. Some "fine day" I may venture nearer the "floor of heaven" and from thence paint my own picture of "this spot which men call earth."

MAY.

VICTORIA, QUEEN OF GREAT BRITAIN AND IRELAND, BORN MAY 24, 1819; ASCENDED THE THRONE JUNE 20, 1837.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Height above horizon.	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon	MOON. Height above horizon.	MOON. Sets. Afternoon	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Afternoon	Day of the Year.
			h. m.	m. s.	Deg.	h. m.	h. m.	h. m.	Deg.	h. m.		h. m.	h. m.	
1	Th	*Philip. James.*	4 35	2 59	53½	7 21	5 10	0 9	48¾	7 21		2 10	2 25	121
2	F	Regulus souths 7h 20m P.M.	4 33	3 7	53¼	7 23	5 35	0 57	52¾	8 32		2 40	3 0	122
3	S	Invent. of Cross	4 31	3 14	54	7 24	6 5	1 49	56	9 45		3 15	3 30	123
4	S	2ND S. aft EAST.	4 29	3 20	54½	7 26	6 42	2 42	58¼	10 49		3 50	4 5	124
5	M	Bonaparte d. 1821	4 28	3 26	54¾	7 27	7 27	3 38	59¼	11 51		4 25	4 45	125
6	Tu	*St. John Evan.*	4 26	3 31	55	7 29	8 23	4 36	59	Morning.		5 5	5 25	126
7	W	Beta Leonis souths 8h 41m P.M.	4 24	3 36	55¼	7 30	9 27	5 33	57½	0 45		5 45	6 15	127
8	Th	Half-Quarter day	4 22	3 40	55½	7 32	10 41	6 29	54½	1 29		6 40	7 10	128
9	F	Twilight ends 10h 22m	4 21	3 44	55¾	7 34	11 59	7 24	50¼	2 4		7 50	8 30	129
10	S	Eta Boötis souths 10h 35m P.M.	4 19	3 47	56	7 35	Afternoon	8 17	45¾	2 36		9 10	9 50	130
11	S	3RD S. aft EAST.	4 17	3 49	56¼	7 36	2 38	9 8	40¼	3 1		10 30	11 10	131
12	M	Arcturus souths 10h 18m P.M.	4 16	3 51	56½	7 38	4 0	10 0	34¾	3 24		11 40	No Tide.	132
13	Tu	Old May Day.	4 14	3 53	56¾	7 39	5 18	10 51	29½	3 48		0 10	0 35	133
14	W	[Easter T. ends	4 12	3 54	57	7 41	6 38	11 43	24¾	4 12		1 0	1 25	134
15	Th	Cuvier died, 1832	4 11	3 54	57¼	7 42	7 55	Morning.	—	4 38		1 45	2 5	135
16	F	Epsilon Boötis souths 11h 2m P.M.	4 10	3 54	57½	7 44	9 7	0 36	21	5 10		2 30	2 50	136
17	S	Spica Virginis souths 9h 37m P.M.	4 8	3 53	57¾	7 45	10 13	1 30	18¼	5 49		3 10	3 30	137
18	S	4TH S. aft EAST.	4 7	3 51	58	7 47	11 9	2 23	16¾	6 31		3 50	4 10	138
19	M	*Dunstan*	4 5	3 49	58¼	7 48	11 55	3 16	16¼	7 23		4 30	4 50	139
20	Tu	Arcturus souths 10h 17m P.M.	4 4	3 47	58½	7 49	Morning.	4 7	17	8 21		5 10	5 30	140
21	W	Length of day 15h 48m	4 3	3 44	58¾	7 51	0 34	4 56	19	9 21		5 50	6 15	141
22	Th	Alpha Coronæ Borealis souths 11h 28m P.M.	4 1	3 40	58¾	7 52	1 6	5 42	20½	10 26		6 40	7 0	142
23	F	Length of night 8h 7m	4 0	3 36	59	7 53	1 32	6 27	25	11 30		7 30	8 0	143
24	S	Qu Vic. born, 1819	3 59	3 31	59¼	7 55	1 53	7 10	28¾	Afternoon		8 35	9 15	144
25	S	5TH S. aft EAST.	3 58	3 25	59½	7 58	2 13	7 52	33	1 42		9 50	10 20	145
26	M	[Pr. Helena b.	3 57	3 20	59½	7 57	2 33	8 34	37½	2 48		10 50	11 20	146
27	Tu	*Ven. Bede.* Trin.	3 56	3 13	59¾	7 59	2 53	9 18	42¼	3 55		11 50	No Tide.	147
28	W	[Term begins	3 55	3 6	60	8 0	3 13	10 2	47	5 4		0 15	0 35	148
29	Th	Asc. Day. *Holy*	3 54	2 59	60	8 1	3 36	10 50	51¼	6 16		0 55	1 15	149
30	F	[*Thursday*	3 53	2 51	60¼	8 2	4 4	11 40	54¾	7 28		1 35	1 50	150
31	S	Length of night 7h 49m	3 52	2 43	60½	8 3	4 38	Afternoon	57¾	8 40		2 10	2 30	151

DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h. After Sunset. O'Clock. 9h. 10h. 11h.

MAY.

The Sun is situated north of the Equator, and is moving north; and on the 21st, at 5h. 10m. P.M., he passes from the sign Taurus to Gemini (the Twins), having been in the former sign 31 days and 7 minutes. On the 1st day he is 95,781,000 miles distant from the Earth. He rises and sets on the 26th, at the N.E. by N., and N.W. by N. points of the horizon, respectively.

The Moon is the constellation Aries till the 2nd, on which day she enters Taurus; on the 5th, Gemini; on the 6th, Cancer; on the 8th, Leo; on the 10th, Virgo; on the 13th, Libra; on the 15th, Scorpio; on the 16th, Ophiuchus; on the 17th, Sagittarius; on the 20th, Capricornus; on the 22nd, Aquarius; on the 24th, Pisces; on the 27th, Cetus; on the 28th, Aries; on the 29th, Taurus; and on the 31st she passes into Orion.

She is above the horizon when the Sun is below, during the morning hours, from the 9th to the 23rd; and during the evening hours, from the 2nd to the 15th.

She is situated north of the Equator from the 1st; is at her extreme north declination on the 5th; is on the Equator on the 12th; at her extreme south declination, on the 18th; again on the Equator on the 26th, and moving northwards.

She is near Mercury on the 2nd; Jupiter on the 12th; Mars, Saturn, and Uranus on the 27th; Venus on the 28th; and Mercury on the 29th.

Mercury is in the constellation Taurus throughout the month.

He rises after the Sun till the 25th, and a little before the Sun from the 26th. He sets after the Sun till the 19th; on the 1st, at 9h. 28m.; on the 6th, at 9h. 20m.; on the 12th, at 8h. 50m.; and on the 19th, at 7h. 53m.: till the 4th day, the Sun sets more than two hours before the planet; on the 6th day, at 1h. 51m. before; on the 9th, at 1h. 32m. before; on the 12th, at 1h. 12m. before; on the 15th, at 47 minutes before the Sun. Till about the 10th day, the planet, though less favourably situated for observation than at the end of last month, is in a very good position for observing him. He sets very nearly at the N.W. by N. point of the horizon during the first half of the month. He is moving eastward among the stars till the 8th; is stationary among them on the 10th; and is moving westward during the remainder of the month. He is near the Moon on the 2nd; in Aphelion on the 26th; and is near the Moon again on the 29th. His path in the heavens is shewn in the diagram in June, and his relative positions to the Pleiades are also there shewn.

Venus is in the constellation Pisces till the 24th; and in Aries from the 25th to the end of the month.

She is a morning star, and rises on the 1st, at 3h. 35m. A.M.; and on the last day at 2h. 42m. A.M.; at the East on the 2nd, at E. by N. on the 18th, and near the E.N.E. at the end of the month. She is moving eastward among the stars; is near Mars on the 6th, Saturn on the 24th, and the Moon on the 28th. She is in Aphelion on the 5th. Her path in the heavens, and relative position to neighbouring stars, are shewn in the accompanying diagram.

Mars is in the constellation Pisces till the 30th, and in Cetus on the 31st.

He is a morning star, and rises on the 6th at 3h. 19m. A.M.; and on the 30th, at 2h. 16m. A.M.; near the East at the beginning of the month, and E. by N. on the 22nd. He is moving eastward among the stars, and is near the Moon on the 27th. His path in the heavens, and relative position to large stars, are shewn in the diagram in last month.

Jupiter is in the constellation Virgo throughout the month.

He is visible during the greater part of the night; and sets on the 1st, at 4h. 1m. A.M.; and on the last day, at 2h. 0m. A.M., between the W. and S. by W. points of the horizon. He moves slowly westward among the stars, and is near the Moon on the 12th. He souths at an altitude of 34½° on the 15th. His path in the heavens, and his relative position to Spica Virginis, are shown in the diagram in the next month.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.

1st Sat. 2nd Sat. 3rd Sat.

Jupiter's Satellites.—Some eclipses of the 1st and 2nd are visible. The relative position of the satellite to the planet at the time of its eclipse is shown in the above diagram, as seen through an inverting telescope.

Saturn is in the constellation Cetus throughout the month.

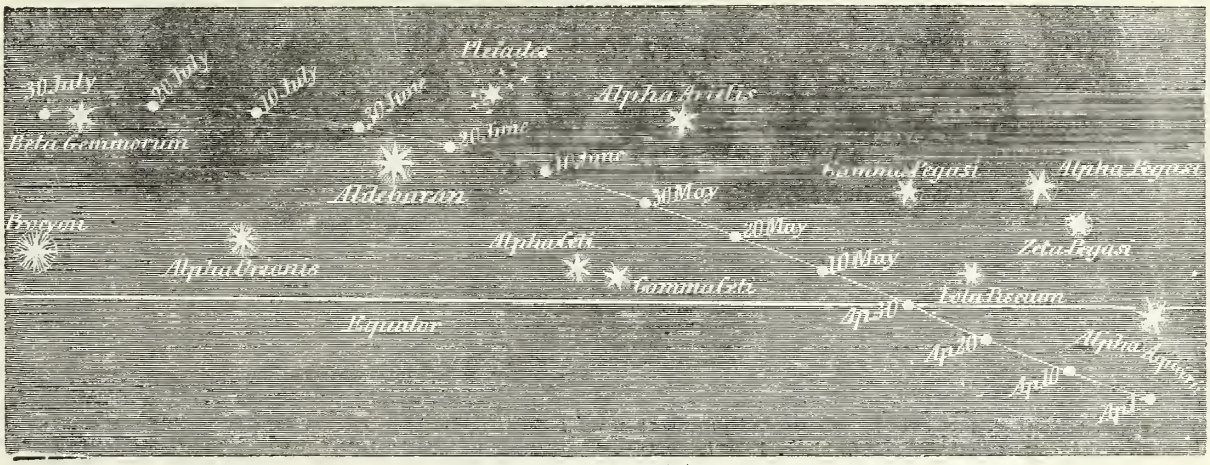
He is visible some little time before sunrise, and rises on the 1st, at 4h. 17m. A.M.; and on the last day, at 2h. 26m. A.M., near the W. by N. point of the horizon. He moves slowly eastward among the stars. (See his path in the heavens in the diagram in November.)

Uranus is in the constellation Aries throughout the month.

He rises on the 6th, at 2h. 25m. A.M.; and on the last day, at 2h. 20m. A.M. He souths on the 15th, at 10h. 29m. A.M.

Neptune rises on the 1st, at 2h. 53m. A.M.; and on the 15th, at 1h. 59m. A.M.

PATH OF VENUS FROM APRIL 1 TO JULY 30, 1851



Scale, 24 degrees to one inch.

By comparing the place of Venus in this diagram on May 5 and that of Mars on the same day in the diagram of last month, with respect to the stars it will be seen that the planets nearly occupy the same place in the heavens, and, therefore, they are near together.

Days of the Month.	TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN. Mercury Afternoon	Venus. Morning.	Mars. Morning.	Jupiter. Afternoon	Saturn. Morning.	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	1 16	9 35	9 43	10 22	11 5	8 11
6	1 7	9 37	9 37	10 0	10 48	7 52
11	0 49	9 39	9 31	9 39	10 30	7 32
16	0 24	9 41	9 26	9 18	10 13	7 13
21	Morning	9 44	9 20	8 57	9 56	6 53
26	11 25	9 47	9 14	8 36	9 38	6 34
31	11 0	9 50	9 9	8 16	9 21	6 15

JUPITER'S SATELLITES. Eclipses of 1st Sat. Emersion.	2nd Sat. Emersion.
D. H. M.	D. H. M.
5 2 24 A.M.	4 9 53 P.M.
6 8 52 P.M.	12 0 29 A.M.
13 10 46 P.M.	
21 0 41 A.M.	
29 9 4 P.M.	

OCCULTATIONS OF STARS BY THE MOON. Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
Chi 2 Orionis	6	4 10 24 P.M.	Dark	40° N. &
		4 10 36 P.M.	Bright	90° N.
1 Delta Cancri	4	7 6 54 P.M.	Dark	9° N. &
		7 8 5 P.M.	Bright	81° N.
80 Virginis	6	13 2 5 A.M.	Dark	8° N. &
		13 2 50 A.M.	Bright	85° N.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.				
New Moon ..	1d.	9h.	2m.	A.M.
First Quarter	8	1	34	P.M.
Full Moon ..	15	8	5	A.M.
Last Quarter	23	1	5	A.M.
New Moon ..	30	8	47	P.M.
Perigee ..	11	7		A.M.
Apogee	23	11		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	Declination North.	VENUS. Right Ascension	Declination South.	MARS. Right Ascension	Declination North.	JUPITER. Right Ascension	Declination South.	SATURN. Right Ascension	Declination North.	URANUS. Right Ascension	Declination North.	NEPTUNE. Right Ascension	Declination South.
1	3h. 51m	22° 54′	0h. 10m	0° 37′	0h. 18m	0° 39′	12h. 59m	4° 37′	1h. 40m	8° 0′	1h. 56m	11° 20′	22h. 43m	9° 0
6	4 2	22 58	0 32	North.	0 32	2 11	12 57	4 26	1 43	8 13	1 57	11 26	22 43	8 58
11	4 4	22 7	0 54	3 49	0 46	3 42	12 55	4 16	1 45	8 26	1 58	11 32	22 44	8 56
16	3 59	20 32	1 46	6 1	1 0	5 12	12 54	4 8	1 47	8 38	1 59	11 38	22 44	8 55
21	3 49	18 33	1 38	8 11	1 14	6 40	12 53	4 2	1 49	8 50	2 0	11 43	22 44	8 54
26	3 39	16 42	2 0	10 18	1 28	8 6	12 52	3 57	1 51	9 2	2 1	11 48	22 44	8 53

MAY.

The sweet season, that bud and bloom forth brings
With green hath clad the hill, also the vale.
The nightingale, with feathers new she sings;
The turtle to her mate hath told her tale.
Summer is come, for every spray now springs.
HOWARD EARL OF SURREY (Beheaded 1547).

MAY ever hrings pleasant memories in its very name, or the fragrant blossoms of the hawthorn have for ages heen called May. Kings and Queens went forth with splendid retinues, "in the days of other years," for a rural holiday into the sweet green conntry to gather May. Beautiful maidens left their tiring howers in the turreted castle, and crossed the moat in the grey of morning, to hathe the roses of their cheeks in the unsunned dews of May. The tallest and straightest tree in the hoary forest was felled, and hronght home with loud shouts, and merry songs, and sounds of rustic music, and was erected on the village green, and hung with garlands in honour of May. The "prettiest low-horn lass" in the village was selected, and crowned with flowers in a green arhour, and called the Queen of May, in the old days of "Merry England." And little children and young lovers still come home in the sweet evenings of the present months, hringing with them branches of May.

Then came Cromwell and his Puritans, preaching against long love-locks and May-games, and holding them np as the worst of sins. They were the death of merry-hearted May. As I have elsewhere observed, May-day was then dead and gone: they tried to revive her again on a later day; at the close of her own flowery month did they endeavour to hring her to life, to celehrate the Restoration of King Charles. Vain attempt! they dressed her pale corse with flowers; pale, and wan, and dead, did they drag her forth, even after her sonl had fled and her heauty perished: hut that bright and merry sunshine of the heart, in which she could alone exist, had left the land. In vain did the Parliament make laws to restore her; she came not to life again: in vain did they pass acts, and make a parade of her through her old haunts; she stirred not, she hreathed not: and the multitude soon ceased to follow the bier, when they saw that their own dear May was horne senseless beneath the garlands which were hung up to honour her; she looked not up to admire them, and then they knew that she was dead.

We have in onr day danced upon the spots which her flowery garlands once overshadowed; for there are two May-poles still standing within five miles of our hirth-place—one at Martin, and the other at Wheatly: the river Trent flows hetween them. They stand on the very spots where May-games were celebrated in the time of Elizaheth. And now they look like skeletons of a past age—landmarks of an old, rude, but happy period. One might fancy, while gazing, that they were at times visited, in the glimpses of the "young May-moon," hy the spirits of the departed village maidens—those who "died unmarried," and who in the hey-day of youth and beauty were crowned Queens of May, and looked upon with admiring eyes by many a "grey forefather of the hamlet," whose very names have ages ago heen forgotten.

But the remembrance of May-day can never cease, while snch artists throw around it the pleasing and life-liko form which it wears in the Illustration at the head of our present month. We look npon the picture, and exclaim with Keats—

A thing of heanty is a joy for ever.

It would make a heautiful, an interesting, and a most pleasing volume, if all the hest passages which have been written on May and May-day games were collected; and there are plenty of well-read gentlemen in England who have hoth the leisure and the taste to make such a selection, and also to enliven the extracts hy their own remarks, and to enrich the whole with notes. Such a work wonld do good, hy keeping green the memory of old scenes and old associations—customs which drew the hearts of our forefathers closer to the works of Natnre, and from those to the Creator—

Who hung these lands with green, this sky with blue,
Who made the plains on which our cities grew;
And all this prosperous island what it is,
And ask'd hut gratitude as His just dne.
The giver God, claiming the heggar's part,
And asking in return a humhle thankful heart.

This is the month for rook-shooting, and we can assure our readers that a pie filled with fine plump yonng rooks, properly seasoned, and well haked, is a good and savoury dish. I have in a former work, "Spring," attempted to translate the language of the rooks when they quarrel during the building season, for I have often fancied while watching them that I clearly comprehended what they said when falling ont, as Washington Irving humourously says, "for a share of the hlanket." Fancy a couple of poor rooks, returning home with a stick apiece

in their mouths (reckoning, no doubt, in their own minds how many trips they would have to make before their nest would be completed); fancy what must be their conversation when, instead of finding the nearly-finished nest as they left it, every stick and twig have been purloined during their absence by a lazy rascal and his wife, who have commenced erecting their house in the next tree. Perhaps the twigs brought by our honest and industrious rooks were the last that were required to finish their nest, and that, before starting off with them out of the neighbouring wood, Mr. Rook had said to Mrs. Rook, to encourage her, "Well, never mind, though it is rather hard work flying all this distance and returning to the rookery with such heavy pieces of timber, yet we shall now have a nice nest of our own, and can go to bed when we like, and get up again whenever we please, or at least lie awake and talk, for those low-bred people who live over our heads in the attics are always up and quarrelling at the first peep of day, and there is no getting a wink of sleep when once their tongues are set a-going; and—— but bless me, how is this, we surely cannot be at home, or have we mistaken the tree? And yet that cannot be, neither! That must be Blackcap peeping out over the edge of his parapet at us; and that is Splayfoot, who lives next door—I know him by his squint; and the other nest belongs to that fellow I had such a battle with about building on this bough, I know him by his long bill and the scar above his eye, which I made with my sharp beak, and which he'll carry to his grave with him. Well, what a shame! I declare, some of the thieves out of the next street have been here during our absence and carried away every stick and stake, even to the very scaffolding. It's too bad; come along, we won't stand it any longer." So they spread out their broad black wings and away they sail to the next tree, and alight on the bough next to that occupied by the robbers, whom they have no difficulty in detecting, for the very bulk into which their nest has so suddenly grown tells that they never came honestly by the materials. "What do you mean, you black-looking scoundrel by coming and carrying off the whole of my house during my absence?" says the indignant and honest rook. "Beg your pardon," answers the dark rascal, whose very looks condemn him, "but I thought, as you were so long gone, you had perhaps left the place altogether, to live in some more peaceable neighbourhood, for this is but a queer place to live in; so, making sure that some other rook would be stepping in and walking off with the materials, why I took the liberty of coming first. Beg pardon, hope there's no offence." "No offence!" exclaims the injured rook, "take that, you thief-looking dog;" and he fetches him such a knock on the head with his beak as sends him spinning against his nest. "I will thank you not to strike my husband," says Mrs. Rook, now standing up on the edge of the unfinished nest. "Your husband deserves it, and you too, madam," replies the wife of the honest rook, "for you are both of you dishonest persons." "I would thank you to keep your impertinence to yourself, if you please," rejoins the robber's helpmate, "if you do not, I shall be under the necessity of compelling you." "You compel me, you bad, good-for-nothing madam you," answers the other; "I'd box your ears for twigs, that I would." "At your peril, dare to lift your claw against me, and I'll give you in charge." "Give me in charge!" says the other, hopping on the nest: "this stick's mine, and I'll have it; deny it if you can." "Not by my consent," says the other, also fixing her claws on the same stick; "we'll have a struggle for it." Then the battle commences: they pull, peck, strike, thrust, then stop a moment to take breath, and at it they go again. Meantime, their husbands are also fighting; the whole neighbourhood is up; from every nest a pair of eyes are peeping out on the combatants; some crying out "Serve 'em right: well done! give it 'em!" Others running off for the police; some endeavouring to separate the quarrellers; and others talking about leaving such a low neighbourhood, and retiring into some quiet respectable park, amongst rooks that have lived with old gentlemanly families.

But to return to rook-shooting. Although it does not come under the head of sporting, it is nevertheless followed up by the farmers in the country; and is as much talked of by them as the commencement of pheasant-shooting by their aristocratical neighbours. The best time to shoot young rooks is when they have quitted their nests, but dare not venture upon a further flight than from one branch to another, which they do not always reach safely, but sometimes miss their footing, and down they come, between flying and falling, and looking anything but graceful as they descend. Cross-bows, bolt-bows, and air-guns are commonly used in rook-shooting, and if the trees are pretty high it requires a good marksman to pick off one of those lumps of "budding blackness" with either bolt or bullet, for the branch is often as likely to be struck as the bird. Then what a rumpus there is amongst the old rooks, as they keep wheeling round and round—no doubt, in their own language calling the sharpshooters "murderous villains," and everything else they can "lay their tongues to." The boys also enjoy the sport, rushing in to pick up the young rooks when they have fallen, or catching them before they touch the ground in their hats or caps. In short, rook-shooting in one part of the country used to be a kind of rural holiday; for the proprietors of the rookeries cared not how many were destroyed, wrongfully believing that they did more harm than good. It has, however, been proved that where extensive rookeries have been destroyed, the corn has been devoured by insects in the following year to such an extent in some neighbourhoods as almost to produce a famine, so much have the fields been overrun by the cockchafer. This alone ought to be a plea urgent enough for the preservation of rookeries.

A walk at the end of May through beautiful country scenery is a pleasure scarcely to be enjoyed at any other season of the year, for the hawthorn hedges are then in full blossom; at no other period is the air filled with such a delicious perfume as they shed abroad. The flowers of Spring have not then faded, and many, that Summer will weave into her gaudy garland, are beginning to bloom. Then we have the cuckoo calling to us by day, and the lute-tongued nightingale sending her gushing music through the silence of the night, while

> Her clear voice makes a loud rioting,
> Echoing through all the greenwood wide.

And you wander on, as the same poet expresses it,

> Till to a lawn you come, all white and green,
> You in so fair a lawn have never been.
> The ground is green with daisy powder'd over;
> Tall are the flowers—the grove a lofty cover:
> All green and white; and nothing else is seen.
>
> CHAUCER'S *Cuckoo and Nightingale.*

The beautiful grasses have now grown tall, and stand waving their brown silky heads in the wind; or, while you gaze, a gush of light steals over them from the edge of some snowy cloud, and they seem changed, as if by the touch of a magician's wand, into a fairy forest of silver; that passes away, then the sunshine sweeps over their ranks, and they look like a large army all marching and keeping time, and shaking their plumes of gold, as they move in measured steps. The daisies too are now tall, and share in the breezy sport, though overtopped by the bold and brazen buttercups, who, like ordinary and over-dressed women, push themselves forward to be seen, and conceal the sweet and bashful beauties whom we would fain behold, and whom we know are near at hand.

In some such spot as this we composed the following lines:—

> A chequer'd light streams in between the leaves,
> Which on the greensward twinkle in the sun;
> The deep-toned thrush his speckled bosom heaves,
> And like a silver stream his song doth run
> Down the low vale edged with fir-trees dun.
> A little bird now hops beside the brook,
> "Peaking" about like an affrighted nun;
> And ever as she drinks doth upward look,
> Twitters and drinks again, then seeks her cloister'd nook:
> Then varied colours o'er the landscape play!
> The very clouds seem at their ease to lean,
> And the whole earth to keep glad holiday.
> The lowliest bush that by the waste is seen
> Hath changed its dusky for a golden green,
> As if to honour the sweet May-day morn:
> The rutted roads did never look more clean.
> There is no dust upon the wayside thorn,
> But every May-bud looks as if but newly born.

How different are the out-of-door sounds now from what they were a few weeks ago. Then, beyond the gritting of wheels on the road, the ploughboy's whistle in some far-off field, or the solitary cawing of the rook, the whole landscape slept in comparative silence. Now the hills and valleys are alive with cattle; from nearly every hedge and tree the birds are singing; on the banks, where before the winter grass lay wan and withered, the flowers are now blooming; and the bee is abroad with his approving murmur, as if sole surveyor over all. The hedges no longer look ruinous and rent; the unsightly gaps are filled up with pleasant leaves—like shabby houses, they are now put into good repair, for Spring, who "paints the meadows with delight," has once more made them habitable, and they are now all let for another season to the birds. Nature seems to delight as much in her new attire as the sons and daughters of man; nor is she without her admirers, if even human eye regarded her not. The wild rose in the forest solitude is visited by the bees and butterflies—they come like lovers to look upon her in her secluded haunts. Even so the mountain maid is found by the hunter at times in her own fastnesses, "a phantom of delight," standing with her pitcher beside some hidden spring, happy as a fawn in its covert, and having no sympathy with the sigh he heaves while grieving that so much beauty should be buried in those untrodden wilds.

Shakspeare, in one of his exquisite snatches of song, says,

> Love whose every month is May;

as if even he could find no more beautiful comparison in the rich garner of his imagination for enduring love than the month of May reigning without change. In this he has pictured Love ever young—the spring-tide of courtship, when what the tongue cannot give utterance to, the looks express—a year of flowers—one endless May hung with blossoms—days without a night, only with a longer twilight drawn like a veil over "day's garish eye," as if to shroud the nightingale while she sings, or that we might behold for a brief hour the stars in their accustomed places. Were we to fill the page, it would but be with the thoughts drawn from these six living words—

> Love whose every month is May;

for, such are the master-strokes of genius, it but touches the canvas and passes on, leaving all ages to wonder at the imperishable outline it drew, doing in a moment what others could never accomplish were they to labour all the round of their dull lives. Shakspeare was a worshipper of Spring; it was the season he selected for the love scene between Venus and Adonis, for she says:—

> Witness this primrose bank whereon I lie,
> These forceless flowers, like sturdy trees, support me.

As for his sonnets, they teem with beautiful descriptions of Spring-time; and over his plays they are scattered, "thick as stars,"

> Each giving each a double charm,
> Like pearls upon an Ethiop's arm.

ERNEST, KING OF HANOVER, BORN JUNE 5, 1771; ASCENDED THE THRONE JUNE 20, 1837.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon.	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon	MOON. Souths. Height above horizon.	MOON. Sets. Afternoon	Moon's Age.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	S. aft. Asc. Day.	3 51	2 34	60¼	8 4	5 22	1 31	59½	9 44	2			2 50	3 10	152
2	M	[Camb. T. div.	3 50	2 25	60¼	8 5	6 14	2 29	59½	10 42	3			3 30	3 50	153
3	Tu	Spica Virginis souths 8h 31m P.M.	3 50	2 16	60¼	8 6	7 17	3 28	58¼	11 31	4			4 10	4 30	154
4	W	Arcturus souths 9h 18m P.M.	3 49	2 6	61	8 7	8 29	4 25	56¾	Morning.	5			4 55	5 15	155
5	Th	K. of Han. b. 1777	3 49	1 56	61	8 8	9 46	5 21	52	0 9	6			5 45	6 10	156
6	F	Epsilon Bootis souths 9h 40m P.M.	3 48	1 46	61¼	8 9	11 7	6 14	47½	0 40	☽			6 40	7 10	157
7	S	Ox. Term ends	3 47	1 35	61¼	8 10	Afternoon	7 5	42¼	1 7	8			7 40	8 15	158
8	S	Whit Sunday	3 46	1 24	61¼	8 11	1 44	7 55	35¾	1 30	9			8 55	9 30	159
9	M	Whit Monday	3 47	1 12	61½	8 12	3 2	8 45	31½	1 53	10			10 5	10 40	160
10	Tu	Whit Tuesday	3 46	1 1	61½	8 12	4 21	9 35	26¾	2 16	11			11 10	11 40	161
11	W	Emb. Week. Oxf.	3 46	0 49	61½	8 13	5 36	10 27	22¼	2 41	12			No Tide.	0 10	162
12	Th	[Term begins	3 45	0 37	61½	8 14	6 49	11 19	19¼	3 9	13			0 35	1 0	163
13	F	Length of day 16h 30m. P.M.	3 45	0 25	61½	8 15	7 57	Morning.	—	3 43	●			1 25	1 50	164
14	S	Antares souths 10h 50m P.M	3 45	0 13	61½	8 16	8 58	0 12	17¼	4 23	15			2 10	2 35	165
15	S	Trin. Sunday	3 44	0 0	61½	8 16	9 49	1 5	16¼	5 11	16			2 55	3 15	166
16	M	Trin. Monday	3 44	After 12 o'clock	61¼	8 16	10 32	1 57	16½	6 6	17			3 35	3 55	167
17	Tu	*St. Alban*	3 44	0 25	62	8 16	11 7	2 48	18	7 9	18			4 10	4 30	168
18	W	B. of Waterl. 1815	3 44	0 38	62	8 17	11 35	3 36	20¼	8 11	19			4 50	5 10	169
19	Th	*Corpus Christi*	3 44	0 51	62	8 18	11 59	4 21	23¼	9 15	20			5 30	5 50	170
20	F	Queen Vic. acces.	3 44	1 4	62	8 18	Morning.	5 5	27	10 22	21			6 10	6 35	171
21	S	Procl. Queen Vic.	3 44	1 17	62	8 18	0 18	5 47	31	11 26	☾			6 55	7 15	172
22	S	1st S. aft Trin.	3 45	1 30	62	8 19	0 38	6 29	34½	Afternoon	23			7 45	8 15	173
23	M	[Longest day	3 45	1 43	62	8 19	0 56	7 11	40	1 37	24			8 45	9 20	174
24	Tu	*St. John Baptist.*	3 45	1 56	62	8 19	1 18	7 55	45	2 46	25			9 50	10 20	175
25	W	[Midsum. Day	3 46	2 8	62	8 18	1 40	8 41	49¼	3 55	26			10 50	11 20	176
26	Th	Length of day 16h 32m	3 46	2 21	62	8 18	2 5	9 29	53¼	5 7	27			11 59	No Tide.	177
27	F	Length of night 7h 28m	3 46	2 34	61½	8 18	2 37	10 22	56¼	6 19	28			0 10	0 40	178
28	S	Q. Vic. cro. 1838	3 47	2 46	61½	8 18	3 14	11 18	58½	7 28	29			1 0	1 25	179
29	S	2nd S. aft. Trin.	3 47	2 59	61½	8 18	4 4	Afternoon	59¾	8 30	○			1 45	2 10	180
30	M	[*St. Peter.*	3 48	3 11	61½	8 18	5 4	1 17	58¼	9 26	1			2 30	2 55	181

JUNE.

The Sun is situated north of the Equator, and reaches his extreme position in north declination on the 21st. He is in the sign Gemini till the 22nd, having been in that sign 31 days 8 hours 31 minutes. On the 22nd, at 1 h. 41m. A.M., he enters the sign Cancer (the Crab), and Summer commences. His distance from the Earth on the first day is 96,374,000 miles. He rises at the beginning of the month at 2° N. of N.E. by N., and about the 20th, at about 5° N. of the same point; and sets at the same distances respectively N. of N.W. by N.

The Moon on the 1st passes from the constellation Orion to that of Gemini; on the 3rd, she enters Cancer; on the 4th, Leo; on the 6th, Virgo; on the 10th, Libra; on the 12th, Scorpio; on the 12th, Ophiuchus; on the 14th, Sagittarius; on the 16th, Capricornus; on the 18th, Aquarius; on the 20th, Pisces; on the 24th, Cetus; on the 24th, Aries; on the 25th, Taurus; on the 27th, Orion; on the 28th, Gemini; and, on the 30th, she passes into Cancer.

She is above the horizon when the Sun is below, during the morning hours, from the 9th to the 26th; and during the evening hours from the 1st to the 16th.

She is at her extreme north declination on the 2nd; is on the Equator on the 8th; at her extreme south declination on the 15th; again on the Equator on the 22nd; and again at her extreme north declination on the 29th; after which she moves southwards.

She is near Jupiter on the 8th; Saturn and Uranus on the 24th; Mars on the 25th; Venus and Mercury on the 27th.

Mercury is in the constellation Taurus throughout the month.

PATH OF MERCURY FROM APRIL 1 TO JUNE 28, 1851.

Scale, 24 degrees to one inch.

He rises before the Sun on the 1st, at 3h. 31m.; on the 15th, at 2h. 52m.; on the 26th, at 2h. 40m.; and on the last day at 2h. 44m. These times are 20m., 52m., and 1h. 4m. before sunrise respectively. He is, therefore, rather favourably situated for observation, before sunrise, towards the end of the month. He sets before the Sun throughout the month. He rises near the E.N.E, on the 1st, and N.E. by N. on the 26th. On the 1st and 2nd he is stationary among the stars; and from the 3rd he is moving eastward; at his greatest west elongation on the 15th; and is near the Moon on the 27th. His path in the heavens is shewn in the first diagram in the opposite column.

Venus is in the constellation Aries till the 10th; in Taurus from the 11th to the end of the month.

She is a morning star, and rises on the 1st at 2h. 41m., and on the last day at 2h. 14m.; on the 5th at E.N.E., and on the last day at the N.E. by N. point of the horizon. She is moving eastward among the stars; and is near the Moon on the 27th. Her path in the heavens is shewn in the diagram in last month; as well as her relative situation with respect to the fixed stars near her.

Mars is in the constellation Cetus till the 4th; and in Aries from the 5th to the end of the month.

He is a morning star, and rises on the 5th at 1h. 57m. A.M.; and on the 29th, at 1h. 1m. A.M.; at the E.N.E. on the 18th. He is moving eastward among the stars; is near Saturn on the 5th, and the Moon on the 25th. His path among the stars during this month is shown in the diagram in April.

Jupiter is in the constellation Virgo throughout the month.

He is visible during the first part of the night, and sets on the 1st at 1h. 56m. A.M., and on the last day at about midnight, between the W. and W. by S. points of the horizon. He is almost stationary among the stars till towards the end of the month, when he begins to move eastward, and is near the Moon on the 8th. He souths at an altitude of 34½° on the 15th. His path among the stars during the whole year is shewn in the second diagram in the opposite column.

Jupiter's Satellites.—Some eclipses of the 1st, 2nd, and 3rd are visible The relative position of the satellites to Jupiter at the instant of the eclipse is shewn in the annexed diagram, as viewed through an inverting telescope.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.

1st Sat. 2nd Sat. 3rd Sat

Saturn is in the constellation Cetus till the 10th, and in Aries from the 11th to the end of the month.

He is a morning star, and rises on the 1st at 2h. 26m. A.M; and on the last day, at 0h. 33m. A.M., near the W. by N. point of the horizon. He moves slowly eastward among the stars, and is near the Moon on the 24th.

Uranus is in the constellation Aries throughout the month.

He rises on the 5th, at 2h. A.M.; and on the 29th, at 0h. 28m. A.M. He souths on the 15th, at 8h. 32m. A.M.

Neptune rises on the 1st, at 0h. 55m. AM.; and on the 15th, at 11h. 52m. P.M

PATH OF JUPITER DURING THE YEAR 1851.

Scale, 12 degrees to one inch.

JULY.

The Moon, on the 1st, passes from the constellation Cancer to Leo; on the 5th she enters Virgo; on the 7th, Libra; on the 9th, Scorpio and Ophiuchus; on the 11th, Sagittarius; on the 13th, Capricornus; on the 16th, Aquarius; on the 17th, Pisces; on the 21st, Cetus; on the 22nd, Aries; on the 23rd, Taurus; on the 25th, Orion; on the 26th, Gemini; on the 27th, Cancer; on the 29th, into Leo; and on the 31st she enters Virgo.

On the 13th there will be an eclipse of the Moon: it will be visible in America, but not here.

She is near Jupiter on the 5th, Uranus and Saturn on the 21st, Mars on the 24th, Venus on the 27th, Mercury on the 29th.

She is situated north of the Equator till the 5th; is at her extreme south declination on the 13th; is on the Equator on the 20th; and is at her extreme north declination on the 27th, after which she moves southwards.

She is above the horizon when the Sun is below, during the morning hours, from the 8th to the 26th; and during the evening hours from the 1st to the 16th, and during the early evening hours on the 30th and 31st

Mercury is in the constellation Taurus till the 3rd, in Gemini from the 3rd to the 16th, in Cancer from the 17th to the 26th, and in Leo from the 27th.

(*Continued on page* 31.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Afternoon	Saturn. Morning.	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 56	9 50	9 8	8 12	9 17	6 13
6	10 39	9 54	9 2	7 52	8 59	5 54
11	10 28	9 59	8 56	7 32	8 42	5 25
16	10 25	10 2	8 51	7 13	8 24	5 6
21	10 28	10 7	8 45	6 54	8 6	4 55
26	10 38	10 13	8 40	6 35	7 48	4 36
30	10 51	10 17	8 36	6 20	7 33	4 17

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Emersion.				3rd Sat. Im. I.				Emer. E.
D.	H.	M.		D.	H.	M.		
5	10	58	P.M.	3	9	14	P.M.	I.
13	0	53	A.M	3	11	35	P.M.	E.
28	11	10	P.M.	11	1	13	A.M.	I.

2nd Sat.			
5	9	38	P.M.
13	0	16	A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.				At which limb of the Moon.	Between what Latitudes visible.
		D.	H.	M.			
Theta Libræ	4½	11	10	6	P.M.	Dark	24° N. &
		11	11	18	P.M.	Bright	74° N.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

First Quarter	6d.	6h.	28m.	P.M.
Full Moon ..	13	6	44	P.M.
Last Quarter	21	6	35	P.M.
New Moon ..	29	6	25	A.M.
Perigee	20	6		A.M.
Apogee	5	1		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination North	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination South.	Saturn. Right Ascension	Saturn. Declination North	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	3h. 33m	15° 21′	2h. 28m	12° 44′	1h. 45m	9° 46′	12h. 51m	3° 53′	1h. 54m	9° 15′	2h. 2m	11° 54′	22h. 45m	8° 52′
6	3 36	15 11	2 51	14 38	1 59	11 7	12 50	3 52	1 56	9 25	2 3	11 59	22 45	8 52
11	3 46	15 52	3 15	16 24	2 13	12 24	12 50	3 53	1 58	9 35	2 4	12 4	22 45	8 52
16	4 2	17 13	3 39	18 1	2 27	15 39	12 50	3 56	2 0	9 44	2 5	12 8	22 45	8 52
21	4 25	18 58	4 4	19 26	2 42	14 49	12 51	4 0	2 2	9 52	2 6	12 12	22 45	8 53
26	4 54	20 52	4 29	20 39	2 56	15 56	12 52	4 6	2 3	10 0	2 6	12 15	22 45	

JUNE.

The poetry of earth is never dead:
When all the birds are faint with the hot sun,
And hide in cooling trees, a voice will run
From hedge to hedge about the new mown mead;
That is the grasshopper's: he takes the lead
In Summer luxury; he has never done
With his delights; for, when tired out with fun,
He rests at ease beneath some pleasant weed.—JOHN KEATS.

JUNE ushers in Summer and the longest day. What a contrast to the middle of December, when, instead of closing the shutters and lighting the candles by four o'clock, we have at the same hour the sun high up amid the blue of heaven, and five long hours of daylight behind, before the purple twilight drops down. Yet these changes strike us not unless we look back, so almost imperceptibly do the days "put out" and "draw in," stealing like sleep upon us unawares—for so engaged are we in watching the changes the seasons bring, that light and darkness flit by like the passing moment, unheeded.

June is Nature's jubilee: on every hand we hear the birds singing; on whichever side we look we see the flowers in bloom; the bee and the butterfly hasten from blossom to blossom: the one slow and steady in his movements, scarcely leaving a bell in the neighbourhood in which he murmurs unvisited, seeming to know that Summer will not last long, and that he must gather honey while the flowers blow, and the sun shines: the other goes jerking his wings from bud to bud, and, without any aim or object save to wile away the passing hours, alights and swings himself just so long as he pleases, as if he knows that his reign will soon be over, and that, when the flowers are gone, his little day will be ended, and the part he has played in the masque of Summer forgotten. The poet Spenser has painted the life of a butterfly as one unceasing round of pleasure. He says:—

What more felicity can fall a creature
Than to enjoy delight with liberty,
And to be lord of all the works of Nature?
To reign in the air, from earth to highest sky—
To feed on flowers, and weeds of glorious feature?
To take whatever thing doth please the eye?
Who rests not pleased with such happiness,
Will worthy be to taste of wretchedness.

It is ever pleasant to us, who are the "slaves of the lamp," to visit the steamboat wharves and the railway stations, and to look at the happy, eager groups who are hurrying off to enjoy the air of the sweet country, or to blow off the smoke of London by the breezy sea-side. Although, at times, we can only accompany them in fancy, still our visions of the flowery meadows and heath-covered hills, and cool old forests, are fresh as in the days of boyhood. Not that the neighbourhood of London—beautiful as it is—can ever charm us like the sylvan solitudes of Sherwood Forest, or the green uplands and wild wide marches and undated woods of our own native Lincolnshire. Dreamers we have ever been; but, although the stern realities of life have thrown their forbidding shadows over the sunshine in which we basked, they have never wholly blotted out our brighter visions. Glimpses of far-off places are ever opening before us—"green nestling spots" which we have loved from childhood. Nature hath never wearied us, but the more we have looked upon her face, the greater has been our admiration, even as a child whose eye tracks the sunset across the sea, while it believes that the trailing pathway of gold ends only on the threshold of Heaven. And what are our dreams of Heaven here? but of a land

Where one eternal Summer reigns—

an endless June, without the carking cares of this busy life—an existence unbroken by sorrow, and unclouded by care—an Elysium in which sighs are never heaved, nor tears ever shed—a land in which there is no night, where the flowers never die—an abode of never-ending happiness. These are but the delights which a mortal mind can conceive—dreams more highly-coloured of earthly delights; and further we are not permitted to penetrate: "eye hath not seen, nor heart conceived," what lies beyond the grave.

To keep up our series of pictures of rural sports or each month, we shall now glance at hawking, which, from the quarry flown at, must have been followed up nearly all the year round, and can, therefore, belong to no particular month. Hawking was as popular a sport in the olden time as stag-hunting, and appears to have been followed almost as much by the ladies as by the other sex. Amongst the old pictures we often see the figure of some forgotten beauty, with a falcon perched on her wrist, her fair hand covered with her hawking glove. The hawks were taken to the field hooded on a frame, carried by one of the falconers, who was a man of some note at this period; a favourite falcon was now and then honoured by being borne to the field on the wrist of its pretty mistress. The legs of the hawk were also adorned with bells, which were frequently made of silver, and no expense was spared to render them soft and musical. The hawk was of course stripped of all its trappings when flown at the quarry. Hawking was fol-

lowed both on foot and on horseback. When on foot, he who followed it carried a stout pole, by the aid of which he leaped the water-courses and ditches. It was while hawking on foot that Henry VIII. got a good ducking: pity he was not drowned, for at that period his name was not then stained with blood; but Heaven willed it otherwise.

The laws for the protection of hawks were almost as severe as those passed to preserve vert and venison (forest trees and deer). Only the nobles and persons of wealth were permitted to keep hawks. If a hawk was lost, he who found it was compelled to give notice to the sheriff, under a heavy fine, when a proclamation was issued for miles around, and a description given of the hawk. If the finder concealed the bird, he had to give it up, and pay its full value or suffer two years' imprisonment; the value was no trifling matter in those days, as a good hawk was sometimes sold for one hundred pounds, which was worth about three hundred at the present value of money. Any one taking away the eggs of the hawk was imprisoned twelve months and a day. Kings sent choice hawks to one another as presents, and even grave judges were not proof against the bribe of a falcon. One of our Kings was so attached to hawking, that he could not invade a foreign country without being attended by his falconers. In France, our Edward III. was followed by thirty mounted falconers. Mews were the names of the places in which hawks were formerly kept, and many stables still bear the name.

The peregrine falcon appears to have been held in the highest estimation by our ancestors, as he was a bold, daring bird, possessing great courage, and never hesitated to pounce upon any quarry which he met in his high airy domain; he, however, never prolonged the sufferings of his victim, but once having seized his prey plunged his piercing bill into its vitals, and killed it in an instant. The grasp of his formidable talons was like that of a vice, and when once the prey was struck there was no escaping. The Gerfalcon was celebrated for attacking larger game, such as herons, cranes, bittern, and other birds that haunt the waters. His plan of attack was by ontsoaring his prey, and when he had gained a sufficient altitude falling upon it like a thunderbolt. I do not know who is the author of the following passage, but it is one of the most graphic descriptions of hawking I have ever met with, and will convey to my readers a better picture of this, all but obsolete, sport than I am able to draw. I, therefore, give it entire. "When I have, in my youthful days, been as glad as ever I was to come from school to see a little martin, in the dead time of the year, make her way through the midst of a multitude of foul-mouthed ravenous crows and kites, which pursued her with more hideous cries and clamours than did Coil the dog and Malkin the maid, like the fox in the apologue,

> When the geese for fear flew over the trees.
> And out of their hives came the swarms of bees.—CHAUCER.

and maugre (in spite of) all their opposition, pulled down her prey bigger than herself, being mounted aloft, steeple-high, down to the ground. To hear one relate how he went forth in a clear, calm, and sunshiny evening, about an hour before the sun did usually mask himself, unto the river, where, finding a mallard, he whistled of his falcon, and how she flew from him, as if she would never have turned her head again, yet presently, upon a shout, came in; how then, by little and little, by flying about and about, she mounted so high, until she had lessened herself, to the view of the beholder, to the shape of a pigeon or a partridge, and made the height of the moon the place of her flight; how, presently, upon the landing of the fowl, she came down like a stone and renewed it, and suddenly got up again; and suddenly, upon a second landing came down again, and, missing of it in the down-come, recovered it, beyond expectation, to the admiration of the beholder. To hear him tell how he went forth to the woody fields and pastures to fly the cock, where having, by the little white feather in his tail, discovered him in a brake, he cast off a tassel-gentle (a hawk), and how he never ceased in his circular motion until he had recovered his place; how, suddenly, upon the flushing of the cock, he came down, and, missing it in the down-come, what working there was on both sides. How the cock mounted as if he would have pierced the skies; how the hawk flew a contrary way until he made the wind his friend; how, then, by degrees, he got up, yet never offered to come in until he had got the advantage of the higher ground; how, then, he made in, what speed the cock made to save himself, and what hasty pursuit the hawk made, and how after two long miles' flight killed it, yet in killing of it killed himself. These discourses I love to hear, and can well be content to be an eye-witness of the sport when my occasions will permit." The whole extract might rank side by side with the finest descriptions of Izaak Walton, and we regret that we cannot give our readers the name of its old author, neither do we know at this moment where we first found the passage, although we have some dim recollection that it was while hunting for facts for our "Historical Romances," in the British Museum, several years ago.

The hobby is one of the smallest species of falcon, and was used for hawking at such birds as larks; and so daring is this little hawk (which is still very common in England), that it has been known to dash in at an open window, at a bird in a cage, when several persons have been in the room. In fowling, this bird was frequently thrown up to keep the birds cowering upon the ground while the net was thrown over them.

The kestrel is one of the most beautiful of the falcon tribe; it may still often be seen, hovering, apparently, motionless in the air, until it discovers its prey, when down it drops like a stone: its vision must be very powerful, when it can see a little bird, or a mouse, from such an altitude. A kite or glede will pounce upon a young hare or rabbit; it has been known to carry off a chicken from the threshold of a cottage, when the owner has been standing within arm's length. Its outspread wings have measured six feet from tip to tip. Buffon says, "One cannot but admire the manner in which its flight is prepared; his long and narrow wings seem immovable; it is his tail that seems to direct all his evolutions, and he moves it continually; he rises without effort, comes down as if he were sliding along an inclined plane—he seems rather to swim than fly; he darts forward, slackens his speed, stops, and remains suspended or fixed in the same place for whole hours, without exhibiting the smallest motion of his wings." It is on record, that in the time of Henry VIII. kites were often seen in the streets of London gathering up the offal which the inhabitants threw out; nor is this to be wondered at, when we remember that the country around London was wild and open for miles. We have frequently seen the kite hovering above a country town.

The noblest quarry flown at in ancient times appears to have been the heron, as he showed the best sport by attempting to outsoar the hawk. It is said that when the hawk descended on its prey, the heron would sometimes turn suddenly round, and receive its enemy on its sharp bill, which, through the velocity of the descent, went, at times, clean through the body of the falcon. This, however, appears to be doubtful, although not impossible. Hawks must have been of great use before the invention of gunpowder, for the fowler's instruments underwent but little improvement during the lapse of centuries.

Having done humble homage in verse to the skylark, I must, before the "leafy month of June" passes away, and her song ceases, pay my tribute of song

TO THE NIGHTINGALE.

Sweet Nightingale! well doth thy lovely song
  Accord with the hush'd breath of moonlight hours;
The green old trees thou warblest now among
  Seem listening silent as the folded flowers,
A mute-lipp'd audience all, who bow profound
Beneath the whispering breeze that bears so sweet a sound.

What countless years, grey on the scroll of time,
  Hath thy rich music charm'd the ancient earth!
When Eden's rosy vales were free from crime,
  Even before the dark-brow'd Cain had birth,
Thy song was heard, bringing to Eve repose,
When her long unbound locks droop'd o'er the thornless rose.

That thou wert once a woman we believe,
  Or such rich music never had been thine.
Poor bird! thou doubtless had much cause to grieve,
  And vowed a vow at Melody's sweet shrine,
Before the echoing altar, through the night,
To keep harmonious watch, and warble back the light.

The moon, the stars, darkness, the oldest gloom,
  Are all familiar with thy witching lay:
The brook, the trees, the Summer's opening bloom,
  The silent wood, the blushing dawn of day—
These all have heard thee, and old forests dim,
Ere trod by man, rung back thy soft and silvery hymn.

And I have heard thee when my heart was sad,
  And thy sweet notes have oftimes soothed my woe;
Rising and falling, sorrowful and glad,
  Just as the feeling seem'd to come or go.
In darkness, in old Sherwood, wild and lone,
I've heard thee sing until the crimson break of dawn.

What a truthful and countrified look has our Artist thrown into the Engraving which heads the present month! How happy the boy looks reclining on the shadowy embankment at the foot of the tree in the foreground of the picture. Nor do the cattle appear as if they were in any hurry to leave the cool water, while such hot sunshine is scorching up the hay-field. We know that the large dragon-fly is somewhere at hand, although we see it not; and that many a wild bird comes to drink and twitter in that shady pool, which has for many a long year reflected the stem of that ancient pollard. Such is the advantage art possesses over literature: it brings before the eye the whole subject at a glance; while the latter drags the scene forward by bits at a time, and line after line must be perused before the reader can comprehend the true meaning of the word-painted picture.

Pleasant is it now to wander into the solemn woods—those grand cathedrals which God himself has erected. To us a holier religion seems at times to reign over the forest solitudes than in the temples built by the hand of man. The deep roaring of the winds through the mossy branches have a sound in our ears unlike aught earthly: the rustling of the leaves, stirred by gentle gales, awakes the heart unaware to prayer; we feel not as we do at other times, when alone in the midst of forest scenery. The pillars hewn, and carved, and upreared by mortal hands, look not so grand and reverential, in our eyes, as an aisle of ancient oaks such as may be seen in Birkland or Sherwood Forest, tossing their gnarled and weather stained branches above our heads, and admitting, through their mossy tops, glimpses of the sky, the starry ceiling which God hung up. The organ never falls upon ears in such solemn tones as the roaring of the ocean, and the breaking of the waves upon a rocky shore. Between the walls of high and lonely mountains we have felt an inward awe, which the vaulted abbey could never awaken; for, over the one hung the great image of the Creator—above the other, we saw, standing on his scaffold, the builder, man.

> To climb the trackless mountain all unseen,
> With the wild flock that never needs a fold;
> Alone o'er steeps and foaming falls to lean;
> This is not solitude—'tis but to hold
> Converse with nature's charms, and see her stores unroll'd.—BYRON.

NICHOLAS, EMPEROR OF RUSSIA, BORN JULY 7, 1760 (O. S.); ASCENDED THE THRONE DECEMBER 1, 1825 (O. S.)

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Souths. Height above the horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon	MOON. Souths. Height above the horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	D g.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Tu	Ox. Act. & C. co.	3 49	3 23	61 3/4	8 17	6 14	2 17	57	10 10		2		3 15	3 40	182
2	W	Sir R. Peel d. 1850	3 49	3 34	61 1/2	8 17	7 31	3 14	53 1/2	10 42		3		4 0	4 25	183
3	Th	Dog Days begin	3 50	3 46	61 1/2	8 16	8 52	4 10	49	11 13		4		4 45	5 10	184
4	F	*Trans. St. Martin*	3 51	3 57	61 1/2	8 16	10 14	5 2	44	11 36		5		5 35	6 0	185
5	S	Ox. Term ends	3 52	4 8	61 1/4	8 16	11 31	5 53	38 1/2	At Midnight.		☽		6 30	6 55	186
6	S	3RD S. aft. TRIN.	3 53	4 18	61 1/4	8 15	Afternoon	6 43	33 1/4	Morning.		7		7 25	7 55	187
7	M	*Thos. àBecket*	3 54	4 28	61 1/4	8 15	2 7	7 32	28 1/4	0 22		8		8 30	9 5	188
8	Tu	Fire Insurance due	3 55	4 38	61	8 14	3 23	8 22	23 1/4	0 45		9		9 35	10 5	189
9	W	Duke of Cambridge died, 1850	3 56	4 47	61	8 14	4 36	9 13	20 1/4	1 12		10		10 40	11 15	190
10	Th	Alpha Serpentis souths 8h 24m P.M.	3 57	4 56	60 3/4	8 13	5 45	10 5	17 3/4	1 43		11		11 45	No Tide.	191
11	F	*Old St. Peter*	3 58	5 4	60 3/4	8 13	6 49	10 58	16 1/2	2 20		12		0 15	0 45	192
12	S	Bat. Boyne, 1690	3 59	5 12	60 1/2	8 12	7 44	11 50	16 1/4	3 5		13		1 10	1 35	193
13	S	4TH S. aft. TRIN.	4 0	5 20	60 1/2	8 11	8 27	Morning.	—	3 57		●		2 0	2 20	194
14	M	Alpha Herculis souths 9h 39m P.M.	4 1	5 27	60 1/4	8 10	9 6	0 40	17 1/4	4 55		15		2 40	3 5	195
15	Tu	*St. Swithin*	4 2	5 33	60	8 9	9 36	1 29	19	5 57		16		3 20	3 40	196
16	W	Day decreased 29 minutes	4 3	5 39	60	8 8	10 2	2 16	22	7 3		17		3 55	4 15	197
17	Th	Alpha Ophiuchi souths 9h 48m P.M.	4 4	5 45	59 3/4	8 7	10 23	3 0	25 1/2	8 8		18		4 30	4 45	198
18	F	Length of day 16h 1m	4 5	5 50	59 3/4	8 6	10 43	3 43	29 1/2	9 13		19		5 5	5 25	199
19	S	Alpha Lyræ souths 10h 44m P.M.	4 6	5 54	59 1/2	8 5	11 2	4 25	33 3/4	10 18		20		5 40	6 0	200
20	S	5TH S. aft. TRIN.	4 8	5 58	59 1/4	8 4	11 21	5 7	38 1/4	11 24		21		6 20	6 40	201
21	M	[*St. Margaret*	4 9	6 2	59	8 3	11 42	5 49	42 3/4	Afternoon		☾		7 0	7 20	202
22	Tu	*Magdalene*	4 10	6 5	58 3/4	8 2	Morning.	6 33	47 1/4	1 37		23		7 45	8 15	203
23	W	Gibralter t., 1704	4 11	6 7	58 3/4	8 0	0 5	7 19	51 1/2	2 46		24		8 50	9 20	204
24	Th	[of Cam.b., 1795	4 12	6 9	58 1/2	7 58	0 33	8 9	55	3 57		25		9 55	10 25	205
25	F	*St. James.* Duch.	4 14	6 11	58 1/4	7 56	1 7	9 2	57 3/4	5 6		26		11 0	11 35	206
26	S	*St. Anne*	4 15	6 11	58	7 54	1 50	9 59	59 1/4	6 11		27		No Tide.	0 5	207
27	S	6TH S. aft. TRIN.	4 17	6 12	57 3/4	7 53	2 46	10 59	59 1/2	7 10		28		0 34	1 0	208
28	M	Eclipse of Sun	4 19	6 11	57 1/2	7 51	3 52	Afternoon	58 1/2	8 1		○		1 25	1 50	209
29	Tu	Alpha Aquilæ souths 11h 15m P.M.	4 21	6 10	57 1/4	7 50	5 8	1 1	55 1/4	8 41		1		2 15	2 40	210
30	W	Length of day 15h 26m	4 23	6 8	57 1/4	7 49	6 29	1 59	51	9 14		2		3 5	3 25	211
31	Th	Alpha Cygni souths at midnight	4 24	6 6	57	7 47	7 51	2 54	46	9 39		3		3 50	4 10	212

JULY.

(Continued from June.)

He rises before the Sun till the 17th, and he sets after the Sun from the 14th till the 3rd. The rising of the planet precedes that of the Sun by rather more than an hour, and after this time it gradually decreases, till on the 18th day they rise together. On the 14th both the Sun and planet set together; and after this day the planet sets after the Sun, and at the end of the month by three-quarters of an hour. He is not favourably situated for observation. He rises near the N.E. by N., and sets near the N.W. by N. points of the horizon. He is moving eastward among the stars throughout the month. He is near the Moon on the 29th.

VENUS is in the constellation Taurus till the 10th, and in Gemini from the 11th to the end of the month. She is a morning star, and rises on the first day at 2h. 15m., and on the last day at 2h. 52m., near the N.E. by N. point of the horizon all the month. She is moving eastward among the stars, and is near the Moon on the 27th.

MARS is in the constellation Aries till the 2nd, and in Taurus from the 3rd to the end of the month. He is a morning star, and rises on the 5th at 0h. 49m. A.M., and on the 29th at midnight; near the E.N.E. at the beginning, and at the N.E. by N. on the 26th. He is moving eastward among the stars, and is near the Moon on the 24th.

JUPITER is in the constellation Virgo throughout the month. He is visible during the early night hours only, and sets on the 1st at about midnight, and on the last day at 10h 4m. P.M., midway between the W. and W. by S. points of the horizon. He moves slowly eastward among the stars, and is near the Moon on the 5th.

SATURN is in the constellation Aries throughout the month. He is a morning star, and rises on the 1st at 0h. 29m. A.M., and on the last day at 10h. 36m. A.M., midway between the W. by N. and the W.N.W. points of the heavens.

URANUS is in the constellation Aries throughout the month. He rises on the 11th at midnight, and souths at 6h. 38m. A.M.

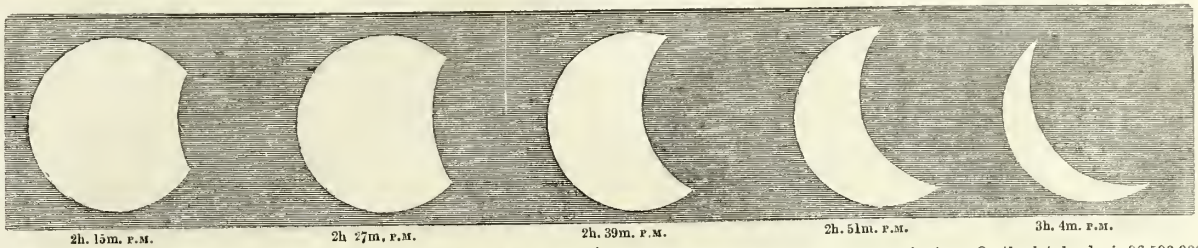
NEPTUNE rises on the 1st at 10h. 57m. P.M., and on the 15th at 10h. 3m. P.M.

The Sun is situated N. of the Equator, and is moving south. On the 23rd day, at 0h. 39m. P.M., he passes from the sign Cancer to Leo (the Lion), having been in the former sign 31 days 10 hours 58 minutes. On the 1st day he is 96,593,000 miles distant from the Earth. He rises and sets on the 18th, at the N.E. by N., and N.W. by N. points of the horizon.

On the 28th there will be a total eclipse of the Sun; a large partial eclipse, however, is all that will be seen here.

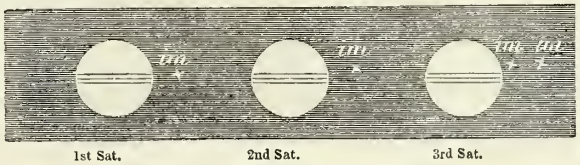
The subjoined appearances of the Sun are prepared for the latitude of London, but are sufficiently near for the whole of the country.

SUCCESSIVE APPEARANCES OF THE SUN DURING HIS ECLIPSE, ON JULY 28, 1851, PRECEDING THE GREATEST PHASE, AS SEEN THROUGH A TELESCOPE WHICH DOES NOT INVERT, AT



2h. 15m. P.M. 2h 27m. P.M. 2h. 39m. P.M. 2h. 51m. P.M. 3h. 4m. P.M.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



1st Sat. 2nd Sat. 3rd Sat.

APPEARANCE OF THE SUN AT THE TIME OF GREATEST OBSCURATION, AT 3H. 12M. P.M., ON JULY 28, 1851, AS SEEN THROUGH A TELESCOPE WHICH DOES NOT INVERT.

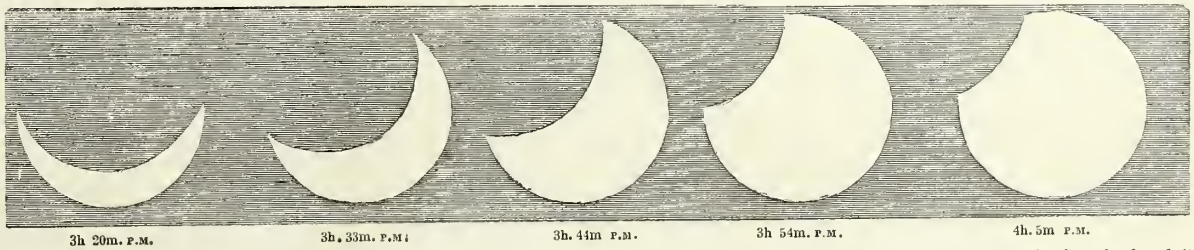
At London. At Edinburgh.

The eclipse will begin at 3m. after two o'clock in the afternoon; the greatest obscuration will be at 12 min. after three o'clock, and the eclipse will end at a quarter of an hour after four o'clock.

The Sun will be totally eclipsed as seen from the southern parts of Norway and Sweden, and the northern parts of Prussia and Russia, Greenland and the

(*Continued on page 33.*)

SUCCESSIVE APPEARANCES OF THE SUN DURING HIS ECLIPSE, ON JULY 28, 1851, AFTER THE GREATEST PHASE, AS SEEN THROUGH A TELESCOPE WHICH DOES NOT INVERT, AT



3h 20m. P.M. 3h. 33m. P.M. 3h. 44m P.M. 3h 54m. P.M. 4h. 5m P.M.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Afternoon	Saturn. Morning.	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 55	10 19	8 35	6 16	7 30	4 15
6	11 17	10 25	8 29	5 58	7 11	3 56
11	11 49	10 31	8 24	5 39	6 53	3 36
16	Aftern.	10 38	8 19	5 21	6 34	3 17
21	0 35	10 45	8 13	5 4	6 16	2 55
26	0 56	10 51	8 8	4 46	5 57	2 36
31	1 12	10 58	8 3	4 29	5 38	2 15

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.	3rd Sat. Emersion.
D. H. M.	D. H. M.
14 9 23 P.M.	16 9 9 P.M.

2nd Sat.

7 9 27 P.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
Xi 2 Ceti	4	22 0 14 A.M.	Bright	5° N. &
		22 0 40 A.M.	Dark	90° N.
m Tauri	5	25 1 58 A.M.	Bright	20° N. &
		25 2 50 A.M.	Dark	90° N.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

FIRST QUARTER	5d.	11h.	8m.	P.M.
FULL MOON	13	7	14	A.M.
LAST QUARTER	21	10	39	A.M.
NEW MOON	28	2	40	P.M.
PERIGEE ..	2	2		A.M.
APOGEE ..	17	10		P.M.
PERIGEE ..	30	2		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY. Right Ascension	MERCURY. Declination North.	VENUS. Right Ascension	VENUS. Declination North.	MARS. Right Ascension	MARS. Declination North.	JUPITER. Right Ascension	JUPITER. Declination South.	SATURN. Right Ascension	SATURN. Declination North.	URANUS. Right Ascension	URANUS. Declination North.	NEPTUNE. Right Ascension	NEPTUNE. Declination South.
1	5h. 31m	22° 34′	4h. 54m	21° 39′	3h. 10m	16° 59′	12h. 53m	4° 13′	2h. 5m	10° 7′	2h. 7m	12° 19′	22h. 44m	8° 54′
6	6 13	23 41	5 20	22 24	2 35	17 58	12 54	4 22	2 6	10 13	2 7	12 22	22 44	8 55
11	6 59	23 50	5 47	22 54	3 39	18 52	12 55	4 33	2 7	10 18	2 8	12 24	22 44	8 57
16	7 46	22 51	6 13	23 7	3 53	19 41	12 57	4 45	2 8	10 23	2 8	12 27	22 43	8 59
21	8 30	20 52	6 39	23 3	4 8	20 26	12 59	4 58	2 10	10 27	2 9	12 29	22 43	9 1
26	9 10	18 9	7 6	22 43	4 22	21 6	13 1	5 13	2 10	10 30	2 9	12 30	22 43	9 3

JULY.

And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interposed,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man.—WORDSWORTH.

READER, of either sex, if thou wert ever in love thou wilt heave a gentle sigh, and a faint smile, like that of an April sunshine streaming with subdued brilliancy through a cloud, will light up thy features, while gazing on this beautiful Engraving. If a man, and thou didst woo and win her in the country, thou wilt again hear the murmuring of the waters, and see her form once more mirrored on its surface, even as it is before him who here sits beside her on the bank, pouring tender vows into her heart, while that heart beats like the bosom of a bird amongst the blossoms which overhang its callow young. If thou art a lady, thou wilt remember how tenderly he led thee by the hand through the deep underwood, lifting up every hooked bramble and straggling thorn, lest thou mightest stumble; and, where cool shadows sheltered thee from the hot sun of July, he made thee a seat of the rustling fern, just where a branching hazel, overtopped by a giant elm, drooped over thy beauty, and how here thou didst, with blushing cheeks and downcast eyes, swear to become his for ever. That day thou canst never forget; that scene has floated between thy dreams and heaven thousands of times, even to the very quivering of the sunlight through the leaves as it played upon his cheek, when he clasped thee (nothing loth) in his arms, and called Heaven to sanctify his vow.

Our summer sun may squander
A blaze serener, grander;
Our autumn beam may, like a dream
Of heaven, die calm away;
But, no—let life before us
Bring all the light it may,
'Twill shed no lustre o'er us,
Like that first trembling ray —T. MOORE.

Who lives in that dear old cottage now? What face peeps between that leaden diamond-shaped lattice round which the roses climbed to peep at thy beauty? Is the little bed of mignionette still cultivated that grew below, on which the small gravel often fell when we threw it on the moonlit casement, nor ceased until thy beauty, like a reflecting star, appeared between the envious blinds? Oh, Love! Oh, Time! Oh, Death! A trembling hand parts the thick sweet-briar over a daisy-covered grave, and below sleeps all that was once so lovely. We lingered not behind to weep, but, with staff in hand, wandered many a lonely mile among the ruins of castles over which the wall-flowers waved, by the shadows of mighty cathedrals, among the crumbling monuments of forgotten pride, and returned, after many months, sad but calm, half broken-hearted, but resigned, burying ourselves for days in the bowers of the Muses, until they listened to our low lispings, and hearkened, with heads aside, while we told them all our sorrows in song. In vain do we still inquire

Whence these feelings rise,
Sorrowful mornings on the darken'd soul;
Glimpses of broken, bright, and stormy skies,
O'er which this earth, the heart has no control?
Why does the sea of thought thus backward roll?
Memory's the breeze that through the cordage raves,
And ever drives us on some homeward shoal,
As if she loved the melancholy waves,
That, murmuring, shoreward, break above a reef of graves.—T. M.

How calm and beautiful is a Summer Sunday in the country! The very village seems asleep, and a holy quiet rests upon the fields unlike that of any other day. No sound is heard but that of Nature, which falls upon the ear in the softened whisper of the leaves, the fainter singing of the brooks, the feebler murmur of the bee, the lower warbling of the birds, and the subdued bleating of the sheep; for so does her voice seem hushed by the peal of the silver bells, which float from the old grey tower, half hidden by trees, on the green hill-side, whose winding path is dotted with the figures of the villagers, here alone, there in little groups, all journeying towards the church with thoughtful and reverential looks. You cannot help contrasting this scene with the noise and tumult of London at the same holy time; the rattling of vehicles, the cries of milk, shrimps, and water-cresses, all breaking the Sabbath charm, and grating harshly upon the ear, while they disperse our better meditations. In the country we look over the landscape at the spire in the distance; and, while we think of those who sleep beneath it, we exclaim—

Where soars that spire, our rude forefathers prayed:
Thither they came from many a distant dell
Year after year, and o'er those footpaths strayed,
When summon'd by the pealing Sabbath bell,
For in those walls they deem'd that God did dwell:
And still they sleep within that bell's deep sound.
Yon spire doth here of no distinction tell:
O'er rich and poor—marble and earthly mound—
The monument of all, it marks one common ground.—T. M.

From Love and the tranquillity of Sabbath scenery to horse-racing is a strange transition, yet not more so than the real changes in life, in the occupations and amusements of mankind; so we shall, without any apology, plunge at once into our description of that fine old English sport, which is still witnessed with delight by both peer and peasant. In our boyish days we, somehow or another, were connected with races, especially those of Doncaster and Lincoln. The grand-stand at Lincoln was a temporary wooden building in those days, with nothing grand about it, except the Gold Cup on the great race day, and the beauty of the Lincolnshire ladies. It was a wooden building, erected for the spectators at the races, and taken down as soon as they were over, and in its erection and removal we had an uncle who played a very prominent part. We still remember with what pride we took up our station in the low, ricketty wooden grand-stand, getting as near to the Gold Cup which was about to be run for as we could, and somehow fancying that it was our duty to see that no one whipped the prize into his pocket, which, if it happened, we thought would be a great stain upon the character of our uncle. Not that we now think such a loss would have concerned him in the least, for we believe that, instead of being steward of the course, he was merely a kind of overlooker over the men who erected the shabby-looking grand-stand; but if any boy not above the head taller than ourselves had dared to assign to him so humble a position at that period, we do think that we should have been disposed "to show fight." However, this link was sufficient to cause us to talk as familiarly of the Yarboroughs and Thorolds as if we had been sworn cousins; also of our favourite horses, on which we even went so far as to bet six to four—in pence.

But Doncaster was the great point of attraction, after all, and only a few miles distant from our birth-place; there the grand-stand and course were worth looking at, and, we must confess, somewhat diminished our admiration of uncle's greatness. What a careful hoarding was there amongst us boys, in those days, to raise sufficient to carry us to Doncaster and back, to see the great St. Leger run for. It was twenty miles each way, yet we walked it, saw the race, and got home long before midnight—tired enough, it is true, but we never thought of that while talking over what we had seen. Then we knew the man who carried the scales to the race-course, in which the jockeys were weighed—and proud were we when he allowed us to pay for the pint of ale he drank. We thought it something to know the man who touched the hoard with his own hands on which sat the very jockey who won the Leger: our delight was equal to that of Peter Pindar's antiquary,

Who showed on holidays a sacred pin
That touch'd the ruff that touch'd Queen Bess's chin.

What running have we seen there! We cannot believe that there ever was or ever will be such another race-course in the world, or that any bird or railway engine ever went the speed those horses did. All things, to us, seem slower now, for we have no longer the quick eye, the bounding step, and the rapidly-racing blood of boyhood to accelerate that imaginary speed, and we exclaim with a sigh—

Somehow, the flowers seem different now—
The daisies dimmer than of old:
There's fewer blossoms on the bough;
The hawthorn buds look grey and cold.
The pansies wore another dye
When we were young!—when we were young!
There's not the blue about the sky
Which every way in those days hung.

Our limits will not permit us to do more than glance over the subject. Chariot-racing was no doubt practised by the Romans when they invaded England: the Britons themselves were celebrated for their skill in driving their scythe-wheeled chariots in battle, which we have dwelt upon at some length in our "History of the Anglo-Saxons." The first chariot-races in England are supposed to have taken place at York, centuries before horse-racing, as now followed, was known, for at this period it does not appear that the horse was either used for riding or even as a beast of burthen. The first mention made of "running horses," in English history, is in the reign of the Saxon King Athelstan, who received them as a present from a foreign Prince. It was Athelstan who first improved the breed of horses in this country, by increasing their size. At the battle of Hastings the Saxons had no cavalry, while horsemen formed the chief strength of the Norman invaders. The first mention made of anything approaching a race-course is by Fitzstephen, an historian who lived in the reign of Henry II. Races, he says, "were then common" on the spot now occupied by Smithfield market, or near that neighbourhood. The horses in those days were ranged in a row, and, when ready, started by raising a shout. It was not, however, until the time of Henry VIII. that horse-racing became a popular amusement in England, or that a regular race-course was formed. Chester is mentioned as being celebrated for its races in the reign of James I. Croydon also boasted, at that period, of its race-course, which was probably more fashionably attended than any other in England. It was here, if we remember rightly, that one of King James's favourites was horsewhipped during the races: the whole transaction is narrated by Osborne. Attention was now paid to the training and feeding of horses, also to the weights of the jockeys, which hitherto seem to have been neglected. Charles I. established races at Newmarket, also in Hyde-park; and he was the first to give a silver cup for a racing prize, in place of the gold or silver bell which had formerly been run for. Cromwell did little more than encourage improvements in the breeding of horses; indeed, it was a point in the character of the Puritans to discountenance sports of any description.

After the Restoration, horse-racing became one of the most popular of English sports, and Charles II.'s stud of mares was held in high repute. His favourite race-course appears to have been Datchet Mead, near Windsor, though, like his unfortunate father, he patronised Newmarket, where he entered his horses in his own name. William III. gave but small encouragement to the sport, though he was favourable to improving the breed of horses; while Queen Anne gave Royal plates for prizes, and her Consort kept an excellent stud, and encouraged the importation of racing stallions. George II. was no patron of the turf; all he appears to have done for racing was substituting the one hundred guinea purses for the Royal plates. George III. encouraged the sport for the sake of procuring a better breed of horses, although he cared little about racing, which had now become so popular as to be independent of Royal patronage; for Eclipse, whose "name was a tower of strength," already occupied the race-course, and from him one hundred and sixty winning horses are said to have been produced. The King's brother, the Duke of Cumberland, bred several excellent racers; amongst which was the celebrated Monck, from whom came Eclipse and Herod, the "giants" of their day. Meteora and Violante were two famous mares of this period, and the property of the Earl of Grosvenor, who is supposed to have won £200,000 on the course, though he was a loser at the last. The Duke of Bedford was the owner of Grey Diomed, which ran at Newmarket against Eclipse and the Traveller. Nor must we pass over the Duke of Queensbury, whose sporting qualities are so admirably painted in the "Quarterly Review," by Nimrod, from which we extract the following:—"His horse Dash, by Florimel, bred by Mr. Vernon, beat Sir Peter Teazle over the six-mile course at Newmarket, for 1000 guineas, having refused 500 forfeit; also, his late Majesty's Don Quixote, the same distance and for the same sum; and during the year 1789 he won two other thousand guinea matches, the last against Lord Barrymore's Highlander, eight stone seven pounds each, three times round the 'Round Course,' or very nearly twelve miles. His carriage match, nineteen miles in one hour, with the same horses, and those four of the highest bred ones of the day, was a great undertaking." For Sir Peter Teazle the Earl of Derby refused £10,000. The following racy extract on racing men, from "Nimrod," dates some dozen years back; yet we know nothing in which so much is done in so small a compass. Some of the characters have departed, but their memories will long live in the following passage:—"Of Messrs. Crockford, Gully, Ridsdale, Sadler, the Chifneys, &c., we need not say much, their deeds being daily before us. But, looking at the extraordinary results of these men's deeds, who is there that will not admit racing to be the best trade going? Talk of studs, talk of winnings, talk of racing establishments; our Graftons, Richmonds, Portlands, and Clevelands, with all their 'means and appliances to boot,' are but the beings of a summer's day, when compared with these illustrious personages and their various transactions and doings on the turf. Here is a small retail tradesman, dealing in a very perishable commodity, become our modern Crœsus in a few years, and proprietor of several of the finest houses in England. Behold the champion of the boxing ring, the champion of the turf, the proprietor of a noble domain, an honourable member of the Reformed Parliament, all in the person of a Bristol butcher. Turn to a great proprietor of coal-mines, the owner of the best stud in England, one who gives 3000 guineas for a horse, in the comely form of a Yorkshire footman! We have a quondam Oxford livery-stable keeper, with a dozen or more race-horses in his stalls, and those of the very best stamp, and such as few country gentlemen, or, indeed, any others, have a chance to contend with. By their father's account of them, the two Messrs. Chifney were stable-boys to Earl Grosvenor, at eight guineas a year and a stable suit. They are now owners of nearly the best horses, and, save Mr. Crockford's, quite the best houses in their native town. There is the son of the ostler of the Black Swan, at York, betting his thousands on the heath, his neckerchief secured by a diamond pin. Then, to crown all there is 'Squire Beardsworth, of Birmingham, with his seventeen racehorses and his crimson liveries, in the same loyal but dirty town in which he once drove a hackney-coach."

A jockey, according to the high authority we have quoted above, ought to be devoid of all passion. He must work hard, and, worst of all, upon an empty stomach; must ever be ready to risk his neck for five guineas, if he wins, and three if he loses. One jockey, on the Beacon-course, rode eleven races in one day, a distance, altogether, of eighty-eight miles. The following is the life of a jockey while in training:—"Breakfast, a small piece of bread and butter, and a moderate quantity of tea; dinner, a small piece of pudding and less meat; no fish allowed, very little wine and water; tea in the afternoon, with a little or no bread. After breakfast, they put on five or six waistcoats, two coats, and as many pairs of breeches, and in these walk ten or fifteen miles. If they return wet through with perspiration, they put on dry clothes or go to bed. Glauber-salts they have free access to, whenever they like, and that appears to be the only run they have of the cupboard."

Nor does the poor devil seem at all to have an easy time of it in the saddle. In Scott's "British Field Sports" we are told, "The spine or back-bone of the jockey must always be prepared to bend in the middle, since in the horse's running there is a necessity for some inclination of the body forward, and nothing can be more awkward and ridiculous than a horseman leaning forward with a back as straight and stiff as a stake, his posteriors protruded in the same degree."

FRANCIS JOSEPH I., EMPEROR OF AUSTRIA, BORN AUGUST 18, 1830; ASCENDED THE THRONE DECEMBER 2, 1848.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Souths. Height above horizon.	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Afternoon	MOON. Souths. Height above horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	F	Lammas Day	4 25	6 3	56¾	7 46	9 17	3 48	40¼	10 5		4		4 35	5 0	213
2	S	Antares souths 7h 37m P.M.	4 27	6 0	56¼	7 44	10 38	4 39	34¼	10 28		5		5 25	5 45	214
3	S	7TH S. aft. TRIN.	4 28	5 56	56¼	7 43	11 55	5 29	29¼	10 51		6		6 10	6 35	215
4	M	Length of night 8h 48m	4 29	5 51	56	7 41	Afternoon	6 20	25	11 17		☽		7 0	7 25	216
5	Tu	Oyster sea. com.	4 31	5 46	55¼	7 40	2 27	7 10	21¼	11 45		8		7 55	8 25	217
6	W	Prince Alfred b.	4 33	5 40	55¼	7 38	3 37	8 2	17½	Morning.		9		8 58	9 35	218
7	Th	Name of Jesus	4 35	5 33	55	7 36	4 43	8 53	16¾	0 22		10		10 10	10 50	219
8	F	Length of day 14h 58m	4 36	5 26	54¾	7 34	5 39	9 45	16¼	1 2		11		11 25	No Tide.	220
9	S	Alpha Herculis souths 7h 55m P.M.	4 38	5 18	54½	7 32	6 27	10 36	16¾	1 51		12		0 5	0 30	221
10	S	8TH S. aft. TRIN.	4 39	5 10	54¼	7 31	7 7	11 25	18¼	2 48		13		1 0	1 25	222
11	M	Half-Quarter day	4 41	5 1	54	7 29	7 40	Morning.	—	3 48		●		1 50	2 10	223
12	Tu	Grouse sh. begins	4 43	4 51	53½	7 27	8 6	0 12	21	4 51		15		2 25	2 45	224
13	W	Old Lammas Day	4 44	4 41	53¼	7 25	8 29	0 57	24¼	5 56		16		3 5	3 20	225
14	Th	Alpha Lyræ souths 9h 2m P.M.	4 45	4 31	53	7 23	8 48	1 41	28	7 2		17		3 40	3 50	226
15	F	Assumption	4 46	4 19	52¾	7 21	9 8	2 23	32¼	8 8		18		4 5	4 25	227
16	S	Beta Lyræ souths 9h 6m P.M.	4 48	4 8	52½	7 19	9 27	3 4	36¼	9 11		19		4 40	4 55	228
17	S	9TH S. aft. TRIN.	4 49	3 56	52	7 17	9 45	3 46	41	10 17		20		5 10	5 25	229
18	M	[Duch. of K. b.	4 51	3 43	51¼	7 15	10 7	4 28	45¾	11 23		21		5 45	6 0	230
19	Tu	Length of day 14h 21m	4 52	3 30	51¼	7 13	10 31	5 12	50	Afternoon		22		6 20	6 40	231
20	W	Gamma Aquilæ souths 9h 42m P.M.	4 54	3 16	51	7 11	11 2	5 59	53¾	1 39		23		7 0	7 25	232
21	Th	Blackcock sh. b.	4 55	3 2	50¾	7 9	11 40	6 50	56½	2 48		24		7 50	8 25	233
22	F	Alpha Aquilæ souths 9h 41m P.M.	4 57	2 47	50¼	7 7	Morning.	7 44	58¾	3 54		25		9 5	9 40	234
23	S	Beta Aquilæ souths 9h 41m P.M.	4 59	2 32	50	7 5	0 28	8 41	59¾	4 55		26		10 20	11 0	235
24	S	10TH S. aft. TRIN.	5 0	2 17	49¾	7 3	1 27	9 41	59	5 50		27		11 40	No Tide.	236
25	M	[*St. Barthol.*	5 2	2 1	49½	7 1	2 39	10 42	56¾	6 34		28		0 10	0 40	237
26	Tu	Prince Albert b.	5 3	1 45	49	6 59	3 56	11 41	53¼	7 9		29		1 10	1 35	238
27	W	Alpha Cygni souths 10h 14m P.M.	5 5	1 28	48¾	6 57	5 17	Afternoon	48½	7 39		0		2 0	2 25	239
28	Th	*St. Augustin*	5 7	1 11	48½	6 55	6 50	1 35	42¾	8 4		1		2 50	3 10	240
29	F	St. John Bap. beh	5 8	0 54	48	6 53	8 13	2 29	37	8 30		2		3 35	3 55	241
30	S	Alpha Aquarii souths 11h 23m P.M.	5 10	0 36	47¾	6 51	9 37	3 21	32¼	8 52		3		4 15	4 40	242
31	S	11TH S. aft. TRIN.	5 12	0 18	47¼	6 48	10 57	4 14	26½	9 19		4		5 0	5 20	243

AUGUST.

The Sun is situated north of the Equator, and is moving south. On the 23rd day, at 7h. 13m. P.M., he passes from the sign Leo to Virgo (the Virgin), having been in the former sign 31 days, 6 hours, and 34 minutes. On the 1st day his distance from the Earth is 96,400,000 miles. He rises and sets on the 15th, at the E.N.E and W.N.W. points of the horizon respectively.

The Moon is in the constellation Virgo till the 3rd. She enters Libra on the 4th; on the 5th she passes into Scorpio and Ophiuchus; on the 7th into Sagittarius; on the 10th into Capricornus; on the 12th into Aquarius; on the 14th into Pisces; on the 17th into Cetus; on the 18th into Aries; on the 19th into Taurus; on the 22nd into Orion; on the 22nd into Gemini; on the 24th into Cancer; on the 25th into Leo; on the 27th into Virgo; and on the 30th into Libra.

She is above the horizon when the Sun is below, during the morning hours, from the 9th to the 26th; during the evening hours, from the 1st to the 21st; and the early evening hours after the 28th.

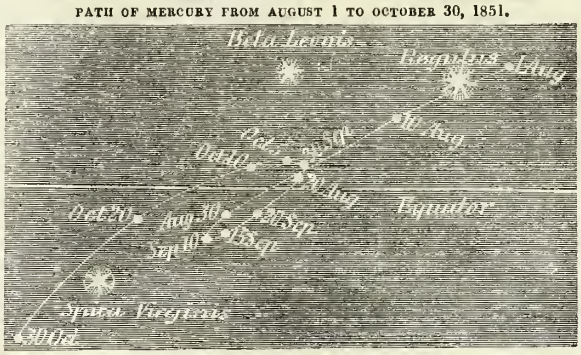
She is on the Equator on the 2nd, and moving south; is at her greatest south declination on the 8th; is on the Equator on the 16th; is at her extreme north declination on the 22nd; and again on the Equator on the 29th, and moving south.

She is near Jupiter on the 2nd; Uranus and Saturn on the 18th; Mars on the 22nd; Venus on the 26th; Mercury on the 28th; and Jupiter on the 30th.

Mercury is in the constellation Leo till the 17th; and in Virgo from the 18th.

The Sun rises and sets before the planet throughout the month. Till the 20th the Sun sets about three-quarters of an hour before the planet, and which interval decreases to 27 minutes by the end of the month; he is not favourably situated for observation. He sets on the 1st, at W.N.W.; on the 11th, at W. by N.; and on the 22nd at the W. point of the horizon. He is moving eastward among the stars throughout the month; is in Aphelion on the 22nd; and near the Moon on the 28th. His path among the stars is shewn in the annexed diagram.

PATH OF MERCURY FROM AUGUST 1 TO OCTOBER 30, 1851.



Scale, 24 degrees to one inch.

Venus is in the constellation Gemini till the 2nd; in Cancer from the 3rd to the 19th; and in Leo from the 20th to the end of the month. She is a morning star, and rises on the first day at 2h. 54m. A.M., and on the last at 4h. 17m. A.M.; on the 1st, at N.E. by N., and on the last day near the E.N.E. point of the horizon. She is moving eastward among the stars, and is near the Moon on the 26th.

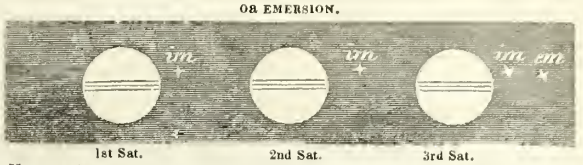
Mars is in the constellation Taurus till the 24th, and in Gemini from the 25th to the end of the month. He is a morning star, and rises on the 4th at 11h. 50m. P.M.; and on the 28th at 11h. 14m. P.M.; near the N.E. by N. at the beginning, and between that point and the N.E. at the end of the month. He is moving eastward among the stars, and is near the Moon on the 22nd. His path among the stars is shewn in the diagram in September.

Jupiter is in the constellation Virgo throughout the month. He is visible for some little time after sunset, and sets at 10h. 0m. P.M. on the 1st, and at 8h. 11m. P.M. on the last day, near the W. by S. point of the horizon. He moves slowly eastward among the stars; and is near the Moon on the 2nd, and again on the 20th. His path among the stars is shewn in June.

Jupiter's Satellites.—A few eclipses only are visible; and the following diagram shews their apparent place, at the time of eclipse, as seen through an inverting telescope.

Saturn is in the constellation Aries throughout the month. He rises on the 1st, at 10h. 32m. P.M.; and on the last day at 8h. 34m. P.M., nearly midway between the W. by N. and the W.N.W. points of the horizon. He is almost stationary among the stars, as will be seen by reference to his path in the diagram in November.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.



1st Sat. 2nd Sat. 3rd Sat.

Uranus is in the constellation Aries throughout the month. He rises, on the 1st, at 10h. 23m. A.M.; and on the last day at 8h. 21m. P.M., and souths on these days at 5h. 32m. and 5h. 34m. respectively.

Neptune rises at 8h. 51m. P.M. on the 1st, and at 7h. 56m. P.M. on the 15th.

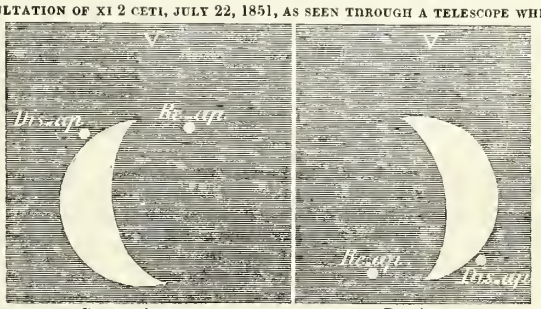
JULY—(*Continued from page* 29.)

northern parts of North America. It will be total at Christiana, Konigsberg, Dantzic, Warsaw, &c.

The approximate times (mean time at each place) of the beginning and ending of the eclipse at the following places may be found useful :—

Place.	Begins.	Ends.	Proportion of the Sun eclipsed.
Altona	2h. 45m. p.m.	4h. 55m. p.m.	11-12ths
Berlin	3 5 ,,	5 10 ,,	11-12ths
Bonn	2 35 ,,	4 45 ,,	5-6ths
Breslau	3 25 ,,	5 25 ,,	11-12ths
Brussels	2 24 ,,	4 35 ,,	5-6ths
Cambridge	2 2 ,,	4 15 ,,	4-5ths
Christiana	2 40 ,,	4 25 ,,	Total
Coimbra	1 42 ,,	3 49 ,,	Nearly total
Copenhagen	2 55 ,,	5 0 ,,	Nearly total
Cracow	4 0 ,,	5 40 ,,	Total
Dantzic	3 25 ,,	5 30 ,,	Total.
Dorpat	3 55 ,,	5 55 ,,	11-12ths
Dublin	1 28 ,,	3 43 ,,	4-5ths
Edinburgh	1 40 ,,	3 53 ,,	3-4ths
Geneva	2 40 ,,	5 0 ,,	3-4ths
Gottingen	2 50 ,,	4 55 ,,	11-12ths
Konigsberg	3 35 ,,	5 35 ,,	Total
Leyden	2 20 ,,	4 30 ,,	5-6ths
Milan	2 55 ,,	5 5 ,,	3-4ths
Munich	3 5 ,,	5 10 ,,	5-6ths
Padua	3 10 ,,	5 15 ,,	5-6ths
Palermo	3 34 ,,	5 30 ,,	2-3rds
Paris	2 20 ,,	4 30 ,,	3-4ths
Prague	3 15 ,,	5 20 ,,	11-12ths
Rome	3 20 ,,	5 25 ,,	3-4ths
Stockholm	3 15 ,,	5 15 ,,	Nearly total
Turin	2 50 ,,	4 55 ,,	3-4ths
Venice	3 10 ,,	5 15 ,,	5-6ths
Vienna	3 25 ,,	5 30 ,,	11-12ths
Warsaw	3 40 ,,	5 40 ,,	Total

OCCULTATION OF XI 2 CETI, JULY 22, 1851, AS SEEN THROUGH A TELESCOPE WHICH



Does not invert. Does invert.

The star will disappear at the bright limb of the Moon at 0h. 14m. in the morning, and re-appear at the dark limb of the Moon at 0h. 40m. in the morning.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Morning	Mars. Morning	Jupiter. Afternoon	Saturn. Morning.	Neptune. Morning.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	1 14	10 59	8 2	4 25	5 34	2 8
6	1 26	11 6	7 56	4 8	5 15	1 48
11	1 34	11 12	7 51	3 51	4 55	1 28
16	1 39	11 17	7 45	3 35	4 36	1 8
21	1 41	11 24	7 39	3 18	4 16	0 48
26	1 39	11 27	7 33	3 1	3 56	0 28
31	1 34	11 32	7 27	2 45	3 36	0 8

JUPITER'S SATELLITES.

Eclipses of 1st Sat. Emersion.	Eclipses of 2nd Sat. Emersion.
D. H. M.	D. H. M.
6 9 40 P.M.	8 9 13 P.M.
22 7 58 P.M.	

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
80 Virginis	6	2 8 0 P.M.	Dark	27° N. &
		2 9 1 P.M.	Bright	85° N.
Psi 3 Aquarii	5	14 3 20 A.M.	Bright	21° N. &
		14 3 55 A.M.	Dark	80° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

First Quarter	4d.	5h.	7m	A.M.
Full Moon	11	9	43	P.M.
Last Quarter	20	0	58	A.M.
New Moon	26	10	20	P.M.
Apogee	14	10		A.M.
Perigee	27	11		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination North.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination South.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′
1	9h. 52m	14° 20′	7h. 37m	21° 56′	4h. 39m	21° 48′	13h. 4m	5° 32′	2h. 11m	10° 32′	2h. 9m	12° 30′	22h. 43m	9° 7′
6	10 23	10 55	8 3	21 0	4 54	22 18	13 6	5 49	2 11	10 33	2 9	12 31	22 43	9 9
11	10 51	7 28	8 29	19 49	5 8	22 42	13 9	6 7	2 12	10 33	2 9	12 31	22 42	9 12
16	11 16	4 5	8 55	18 23	5 22	23 2	13 12	6 25	2 12	10 32	2 9	12 30	22 42	9 15
21	11 38	0 55	9 19	16 44	5 36	23 18	13 15	6 45	2 12	10 31	2 9	12 30	22 41	9 18
26	11 56	South	9 44	14 53	5 50	23 28	13 18	7 5	2 12	10 29	2 9	12 28	22 40	9 22

AUGUST.

The unpeopled dwelling mourns its tenants strayed,
E'en the domestic laughing dairy-maid
Hies to the field, the general toil to share;
Meanwhile the farmer quits his elbow chair,
His cool brick floor, his pitcher, and his ease,
And braves the sultry beams, and gladly sees
His gates thrown open, and his team abroad.—ROBERT BLOOMFIELD.

AUGUST is a lovely month, with its harvest-fields and harvest-moon, and rich sunsets that gild the tops of the broad-branched oaks with gold, and throw over the corn-fields a deep yellow light, making them look like vast beds of marigolds unbroken by a single patch of green. Pleasant is it in the cool evenings of this month to quit the sultry streets and close courts of London, and to find one's-self wandering in the delightful fields of Surrey or Kent, over old brown foot-paths which have been a free highway for the villagers for centuries; to meet laden gleaners and sun-tanned reapers returning home with sickles thrown over their arms, or bearing bottles and baskets, now emptied by the keen and healthy appetites which labour and sweet air bring; to turn your head when they have passed you, and see them branch off to little thatched homesteads that stand here and there, one nestled amid trees, another in the green lane you have just passed, or at the end of the slip of cultivated land fenced in from the broad high-road; while the farmer and his men and maids turn to the large grange, surrounded with its goodly and capacious out-houses and huge barn, through the doors of which the high-piled waggon can be driven, without a plumy sheaf touching the spanning beam above.

Then to think of the sweet unfevered sleep those happy peasants will enjoy in their lowly chambers, through which the pure breeze has all day blown, and wafted healthy perfumes from corn-fields, and old woods where the woodbines bloom, and clear streams by which the meadow-sweet still flowers, and windy hill-tops, and broad wastes where the purple heather now blossoms "musical with bees." Surely it is better to rest with contented poverty in these humble abodes, than to share

What they amid the leaves have never known,—
The weariness, the fever, and the fret,
Here, where men sit and hear each other groan
Where palsy shakes a few sad last grey hairs;
Where youth grows pale, and spectre-thin, and dies;
Where but to think is to be full of sorrow
And leaden-eyed despair;
Where Beauty cannot keep her lustrous eyes,
Or new Love pine at them beyond the morrow.—KEATS.

With them, if our fare is coarse, it will be eaten uncontaminated by the nauseous smells of cities; free from the reek and heat of gin-palaces, and the hot air which rises of brick that have been baking all day in the sun throw out; far away from rooms into which only dust and foul smells enter, where, if we throw up the casement to look at the stars as a relief, we are compelled to close the window in disgust, and exclaim with *Hamlet*,

And smelt so? pah!

Alas! that it should be so. Those rural cottages, that look so beautiful in the eyes of a lover of the picturesque, often shelter sorrow and suffering, poverty and hunger; the poor labourer during the winter season is scarcely able to provide for the wants of the coming morrow, or to keep the dreaded "wolf from the door," which ever comes howling about the threshold in the form of gaunt and meagre hunger.

I need but again glance at that night-scene which the moon looked upon at Goatacre, a few years ago, to prove this, when, as she seemed struggling from cloud to cloud, her pale rays fell for a moment upon some forlorn and furrowed countenance, or gave a wanner and paler hue to the hunger-bitten features of the miserable peasantry. I need but again picture the naked hedge, through which the cold wintry wind whistled, while the candled flickered in the night wind, which blew about the ragged denouncer of wrongs as he stood on that rude burdle, and addressed his suffering brethren: all this I might do, but it would be with painful feelings that I should again lift up the curtain and paint the looks of those determined men, who were then clamorous for cheap bread. Thank God! we have obtained that, though I fear it has bettered but little the condition of our suffering peasantry, while it has fallen with somewhat of a heavy hand on the honest and high-rented farmer.

The large ox-eye daisy is now in flower, and, together with the wild scarlet poppy, forms a rich covering of silver and crimson on waste and uncultivated places. By the borders of brooks, the arrow-head may now be found with its white pearl-like flower centred with gold and purple. The corn-fields also abound with the beautiful pheasant-eye, called the rose-a-ruby, and still known

by that poetical name in a few out-of-the-way villages. But amongst the last of the summer flowers our favourite is the light and graceful harebell—a flower so delicate that we wonder the breeze does not blow its light blue cup from the slender stem, and bear it away amongst the leaves, which are now falling on every hand. The blackberries begin to show amongst the armed brambles like miniature bunches of grapes, which want but a few frosty nights to complete their gushing ripeness. When boys, we never tasted blackberries without first blowing on them, believing that, by so doing, we should drive out the insects which at times lodge in this oldest of all wild British fruits.

In my "Book of Summer" I have sketched a true corn-field character, the Bird Boy, or corn-tenter, his business being to scare the birds from the corn either with his wooden clapper or by his voice, the latter of which he uses until he is quite hoarse at times, through hallooing and screaming at the birds. You almost wonder how the little fellow manages to pass the day by himself in those solitary fields before harvest-time, far removed from either village or homestead. Above his head he sees the broad grey clouds floating silently along across the wild wilderness of the sky, silent saving the hoarse "caw" of the dusky rook, that flaps its black wings while it floats like some subtle spirit between earth and heaven, on its way homeward to the woods. Around him rise tall trees, and while he looks up at them he wonders how many years they have stood rooted in silence on that self-same spot, where they reach to such a cloud-like height. Sometimes he is far away from any road, and in the heart of old extensive fields which are shut up all the year except at harvest-time. He sees the grey rabbits emerge from their burrows in the bank, and watches the young ones as they run in and out amongst the standing corn; and he makes all kinds of curious snares, and is sadly puzzled to know why he can never catch them. He peeps through the hedge, and is delighted to see the hares play together in the long grass; and sometimes he finds a nest of young hedge-hogs, which he passes half the day in feeding, giving them everything that comes to hand, and which if they will not take willingly he forces gently down their little throats, which he fancies are full of prickles like their backs, because they swallow what he gives them with such reluctance. While the cuckoo remains with him he mocks her, and often imitates her cry after she is gone, for it is a treat to him to hear his own voice in those silent and solitary fields. He rattles his wooden clapper until his arm aches, and sings the very song which his forefathers sang two or three hundred years ago, when they tented the corn like him, and thus called to the birds:—

Away, birds, away! and come no more to-day.
Away, birds, away!
Take an ear and leave an ear,
And come no more again this year.
Away, birds, away!

The English sport we have selected for our present month is Cricketing, which, although not known by the name it now bears more than one hundred and fifty years (as far as we have been able to discover), has made such rapid progress during the last half-century as entitles the game to take high rank amongst our field amusements. In our eye there is something very pleasing in this healthy, noiseless, and out-of-door game, especially in those spots where we have witnessed it, in the calm coolness of a sunny summer evening, when we have come upon the players unaware on some ancient common which, time out of mind, has been the play-ground of the villagers. True the players were "unknown to fame" in the great world of cricket, but it was sufficient for them that their sweethearts and acquaintance were looking on to induce them to "do their best;" and now and then we have seen some villager display such natural science, that we have had no fear of seeing his name recorded amongst the ranks of those who dare to give the challenge to All England, and generally gain the victory. Pleasant too is it to recline on a green hill-side, overlooking the vale in which the cricketers are assembled; and all the more enjoyed if the village bells are sending forth a silvery peal from the old church-tower, beneath which some celebrated father of the game sleeps, who, years ago, was the pride of the village cricket club. You need but go at night into the cool parlour, with its red brick floor, after the game on the green is ended, and there you will hear, while enjoying your jug of home-brewed ale, how he could bat, and how he could bowl, for the land-marks are yet remembered which his balls reached, and never have fieldsmen had need to stand so far out since he died. Ask how many wide balls he threw, and they will stare at you in amazement, or say that he could have thrown the ball through the eye of a needle had it been big enough.

Pleasanter still is it to look at a grand cricket match, when "Greek meets Greek"—when every man respects the play of his adversary—when the wicket is guarded as cautiously as the outer barbican of a castle, the battlements manned with the best bowmen; for the word had gone before, that the hero with the eye of fire and the arm of iron would ere long be battering at the gates. Then there is a breathless hush over the wide field, and when some wonderful point is made the applause rises not beyond a deep low hum, for he who seems to have an understanding with the ball—who leans upon his bat as if it were his "familiar," is about to deal another "witching" stroke, and they dare neither shout nor keep their eyes away for a moment, so spell-bound are they by the power of the player. Had cricketing been known to the matchless sculptors of ancient Greece, what lifelike forms of manly beauty would they have left in imperishable marble—graceful attitudes and muscular developments, and god-like groupings, far surpassing in beauty anything we now possess; for no sport gives finer play to the limbs, no game places the body in more graceful attitudes than that of cricket. Then how beautifully the snow-white tents contrast with the green of the overhanging trees, while the turf below, over which the strikers run, light as fallow-deer, is "all one emerald," as if an "eternal April" kept constant watch over it, and sprinkled the grass with her gentlest showers. The cricketers in their white dresses, as seen from a distance, break the green of the landscape like spots of light that fall upon the eye. Few, we should imagine, can see this manly game played without feeling delighted, even when they do not understand the rules of it, such life and animation is there in the contending parties—the keen eye, the ready hand, the rapid strides, the fieldsman who to a yard or two seems to calculate the distance the ball will be struck; every man, in fact, moving in his place, like the true harmony of music, without a jarring chord.

Our space prevents us from doing more than barely glancing at a few rules of the game as it is now played. A ball must not weigh more than five ounces and three-quarters, nor less than five ounces and a half, while the bat must not exceed four inches and a quarter in breadth, nor more than thirty-eight inches in length. The stumps must stand twenty-seven inches above the ground; the bail be eight inches in length; the distance between the wickets to be twenty-two yards. The bowling-crease must be in a line with the stumps, and in length six feet eight inches; the popping-crease, unlimited in length, to be four feet from the wicket, and parallel to it. The wickets to be pitched by the umpires. During a match the ground must neither be rolled, watered, mown, nor beaten without the consent of both parties. The bowler must deliver the ball with one foot on the ground behind the bowling-crease, and within the return-crease; he must also bowl four balls before changing wickets; the ball must be bowled not thrown or jerked, and the hand must not be above the shoulder while delivering it. The bowler may require the striker at the wicket from which he is bowling to stand on whichever side he may direct, &c. We find the following remarks in Blaine's "Rural Sports." The passage is there marked as a quotation, but from what author is not mentioned—a rare omission on the part of this honest writer:—

"The wicket-keeper holds an important station in the game. He stands opposite to the bowler, and behind the wicket at which the striker is playing. Beside the bowler and wicket-keeper, who are the two most serviceable men in the field, there are the slips or stops, short and long. The first short slip, who stands near to the wicket-keeper, consequently behind the wicket, yet diagonally in front of the batter. The point directly faces the striker: his station is about seven yards from the popping-crease. The middle wicket stands on the off-side, and about twenty-three yards from the striker's wicket. The leg or hip has his appointment about sixteen yards from the popping-crease, behind the batter. The long-stop is placed behind the wicket-keeper, to save the balls he may miss as they come from the bowler, for the batter may take the advantage of running when a ball has been overthrown, or has not been stopped after the bowler has delivered it, although it may not have been struck. The long-slip stands in a line with the striker, and between the point and short-slip, but further out in the field. A man to cover the middle wicket and the point stands on the off-side of the striker; and it is his duty to save those balls that either of the above may have missed. The long-field on the off-side stands between the middle wicket and the bowler, but at a considerable distance, to save the hard hits. The long-field on the on-side is stationed at a great distance from the striker, and on the other side of the bowler from the man last mentioned. After every four balls have been bowled the umpire calls 'Over,' when the whole party who are seeking out (with the exception, of course, of the bowler and wicket-keeper) change their positions to the opposite quarters of the field."

For instructions how to bowl, &c., we must refer our readers to an admirable little shilling work, a *multum in parvo*, published by a gentleman who signs himself "Bat," where they will find all that is interesting and necessary to be known for the proper playing of the noble game of cricket; it is cheap, concise, and contains everything appertaining to this fine manly sport. We will close the present month with two rural pictures of our own in verse—a cottage-girl crossing a brook, and a troop of soldiers passing a village.

A cottage-girl trips by with sidelong look,
Steadying the little basket on her head;
And, where a plank bridges the narrow brook,
She stops to see her fair form shadowed.
The stream reflects her cloak of russet red;
Below she sees the trees and deep blue sky,
The flowers which downward look in that clear bed,
The very birds which o'or its brightness fly:
She parts her loose-blown hair, and, wondering, passes by

A troop of soldiers pass with stately pace—
Their early music wakes the village street;
Through the white blinds peeps many a lovely face,
Smiling, perchance unconsciously how sweet!
One does the carpet press with blue-veiu'd feet,
Not thinking how she her fair neck exposes,
As with white foot she times the drum's deep beat;
And when again she on her pillow dozes,
Dreams how she'll dance that tune 'mong summer's sweetest roses.

So let her dream, even as beauty should!
Let the white plumes athwart her slumber sway
Why should I steep their swaling snow in blood,
Or bid her think of battle's grim array?
Truth will too soon her fiery star display,
And like a fearful comet meet her eyes.
And yet how peaceful they pass on their way!
How grand the sight as up the hill they rise!
I will not think of cities reddening in the skies.

SEPTEMBER.

ISABELLA II., QUEEN OF SPAIN, BORN OCTOBER 10, 1830; ASCENDED THE THRONE SEPTEMBER 29, 1833.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises.	MOON. Souths.	MOON. Height above horizon	MOON. Sets.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 3h. 4h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 8h. 9h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	M	Partridge and Bustard shooting begins	5 13	0 0	47	6 46	0 15	5 5	22¼	9 48		6		5 45	6 5	244
2	Tu	London bt., 1666.	5 15	0 19	46½	6 44	1 29	5 58	19	10 21		7		6 30	6 55	245
3	W	Length of day 13h 26m	5 16	0 38	46¼	6 42	2 36	6 50	17	11 0		8		7 15	7 45	246
4	Th	Alpha Lyræ souths 7h 38m P.M.	5 18	0 57	45¾	6 40	3 36	7 42	16	11 48		9		8 20	9 0	247
5	F	*Old. St. Bartholo.*	5 20	1 17	45½	6 37	4 26	8 33	16¼	Morning.		10		9 45	10 25	248
6	S	Beta Lyræ sths 7h 43m P.M.	5 21	1 37	45	6 35	5 8	9 22	17¾	0 41		11		11 5	11 45	249
7	S	12TH S. aft. TRIN	5 23	1 57	44¾	6 32	5 43	10 10	20	1 41		12		No Tide.	0 15	250
8	M	Nat. B. V. Mary	5 24	2 17	44¼	6 39	6 10	10 55	23	2 43		13		0 45	1 10	251
9	Tu	Gamma Aquilæ souths 8h 26m P.M	5 26	2 38	44	6 27	6 34	11 39	26¾	3 48		14		1 30	1 50	252
10	W	Day breaks 3h 26m	5 27	2 58	43¼	6 25	6 54	Morning.	—	4 54		●		2 10	2 25	253
11	Th	Length of day 12h 54m	5 29	3 19	43	6 23	7 13	0 21	30¾	5 58		16		2 40	2 55	254
12	F	Alpha Aquilæ souths 8h 18m P.M.	5 31	3 40	44¾	6 20	7 32	1 3	35¼	7 3		17		3 10	3 25	255
13	S	[*Holy Cross*	5 32	4 1	42½	6 18	7 50	1 44	39½	8 8		18		3 40	3 55	256
14	S	13TH S. aft. TRIN.	5 34	4 22	42	6 16	8 11	2 26	44¼	9 14		19		4 10	4 25	257
15	M	Beta Aquilæ souths 8h 11m P.M.	5 35	4 43	41¾	6 14	8 35	3 10	48½	10 21		20		4 40	4 55	258
16	Tu	Buck-Hunt. ends	5 37	5 4	41¼	6 12	9 0	3 55	52½	11 28		21		5 10	5 25	259
17	W	*Lambert.* Ember	5 38	5 26	41	6 9	9 34	4 43	56	Afternoon		22		5 45	6 0	260
18	Th	[Week	5 40	5 47	40½	6 7	10 17	5 34	58¼	1 42		◐		6 25	6 45	261
19	F	Alpha Cygni souths 8h 44m P.M.	5 42	6 8	40¼	6 5	11 11	6 29	59½	2 44		24		7 15	7 45	262
20	S	Twilight ends 7h 58m	5 43	6 29	39¾	6 2	Morning.	7 26	59¾	3 38		25		8 25	9 10	263
21	S	14TH S. aft. TRIN.	5 45	6 50	39¼	6 0	0 15	8 24	58¼	4 23		26		9 55	10 40	264
22	M	[*St. Matthew*	5 47	7 11	39	5 58	1 29	9 23	55¼	5 3		27		11 20	11 55	265
23	Tu	Autumn Q. begins	5 48	7 32	38½	5 56	2 50	10 21	51¼	5 36		28		No Tide.	0 25	266
24	W	Fomalhaut souths 10h 37m P.M.	5 50	7 52	38¼	5 54	4 15	11 17	46	6 3		29		0 55	2 0	267
25	Th	Length of day 12h 1m	5 51	8 13	37¾	5 52	5 42	Afternoon	40	6 28		○		1 40	2 5	268
26	F	*St. Cyprian*	5 53	8 33	37½	5 50	7 7	1 7	34¼	6 53		1		2 25	2 50	269
27	S	Alpha Pegasi souths 10h 33m P.M.	5 55	8 53	37	5 47	8 34	2 1	28¾	7 18		2		3 10	3 30	270
28	S	15TH S. aft. TRIN.	5 56	9 13	36¾	5 45	9 55	2 55	24	7 49		3		3 50	4 15	271
29	M	*Michaelmas Day*	5 58	9 33	36¼	5 43	11 12	3 49	20	8 18		4		4 35	4 55	272
30	Tu	*St. Jerome*	5 59	9 52	35¾	5 41	Afternoon	4 43	17½	8 57		5		5 15	5 35	273

SEPTEMBER.

The Sun is situated north of the Equator till the 22nd; and he crosses the Equator, going south, on the 23rd. He passes from the sign Virgo to Libra on the 23rd day, at 3h. 51m. P.M., and Autumn commences, he having been in the former sign 30 days, 20 hours, 38 minutes. On the 1st day his distance from the Earth is 95,825,000 miles.

He rises and sets on the 23rd, at the east and west points of the horizon.

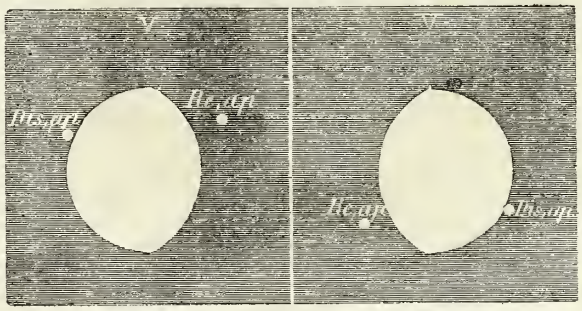
The Moon, on the 1st, passes from the constellation Libra into that of Scorpio; on the 2nd she passes into Ophinchus; on the 4th, into Sagittarius; on the 6th, into Capricornus; on the 8th, into Aquarius; on the 10th, into Pisces; on the 13th, into Cetus; on the 14th, into Aries; on the 15th, into Taurus; on the 18th, into Orion; on the 19th, into Gemini; on the 20th, into Cancer; on the 22nd, into Leo; on the 24th, into Virgo; on the 26th, into Libra; and on the 29th, into Scorpio and Ophiuchus.

She is above the horizon when the Sun is below, during the morning hours, from the 8th to the 28th; during the evening hours, from the 1st to the 21st; and the early evening hours, from the 27th

She is at her extreme south declination on the 5th; is on the Equator on the 12th; at her extreme north declination on the 19th; is again on the Equator on the 25th; after which she is moving southward.

She is near Uranus and Saturn on the 14th, Mars on the 19th, Mercury on the 24th, Venus on the 25th, and Jupiter on the 26th.

OCCULTATION OF A STAR OF THE 4TH MAGNITUDE BY THE MOON, SEPTEMBER 14, 1851, AS SEEN THROUGH A TELESCOPE WHICH



Does not invert. Does invert.

The star will disappear at the bright limb of the Moon at 10h. 20m. P.M., and re-appear at the dark limb at 11h. 16m. P.M.

Mercury is in the constellation Virgo throughout the month. The Sun rises before the planet to the 21st; they rise at the same time on the 22nd; and from the 23rd the planet rises before the Sun, by 30 minutes on the 25th, and by 1 hour 16 minutes on the last day. He sets after the Sun by intervals decreasing from 25 minutes on the 1st to 2 minutes on the 12th. During a few days only, at the end of the month, before sunrise, he is favourably situated for observation. He sets till the 18th near the W. by S.; and he rises on the 25th at the east point of the horizon. He is moving eastward among the stars till the 7th; is stationary among them on the 8th; and is moving westward from the 9th to the 29th. He is near Venus on the 22nd, and the Moon on the 24th.

Venus is in the constellation Leo till the 16th, and in Virgo from the 17th to the end of the month.

She is a morning star, and rises on the 1st at 4h. 21m., and on the last day at 5h. 35m.; near the E.N.E. at the beginning of the month, at the E. by N. on the 13th, and at the E. point of the horizon on the 27th. She is moving eastward among the stars, and is near the Moon on the 25th. Her path among the stars is shewn in the diagram in December; and, by comparing her place in this diagram on September 22 with that occupied by Mercury on the same day, (see his path in last month), it will be seen that these planets at this time occupy nearly the same place in the heavens.

PATH OF MARS FROM JULY 1 TO DECEMBER 31, 1851.

Scale, 24 degrees to one inch.

Mars is in the constellation Gemini throughout the month. He is a morning star, and rises at 11h. 4m. P.M. on the 3rd; and at 10h. 36m. P.M. on the 27th; nearly midway between the N.E. by N. and the N.E. points of the horizon. He is moving eastward among the stars, and is near the Moon on the 19th. His path among the stars from July 1 to the end of the year is shewn in the above diagram.

Jupiter is in the constellation Virgo throughout the month. He is visible for a short time after sunset; and sets on the 3rd at 7h. 59m. P.M., and on the 27th at 6h. 34m. P.M., near the W. by S. point of the horizon. He moves eastward among the stars, and is near the Moon on the 26th.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.

1st Sat. 2nd Sat. 3rd Sat.

Saturn is in the constellation Aries throughout the month. He is visible throughout the night; rises at 8h. 23m. P.M. on the 3rd, and at 6h. 46m. on the 27th, nearly midway between the W. by N. and the W.N.W. points of the horizon; and souths at an altitude of 48½° on the 15th.

Uranus is in the constellation Aries throughout the month. He rises on the 15th at 7h. 22m. P.M., and souths at 2h. 34m. A.M.

Neptune rises on the 1st at 6h. 47m. P.M., and sets at 5h. 19m. A.M.; and on the 15th at 5h. 48m. P.M., and 4h. 18m. A.M.

SUCCESSIVE TELESCOPIC APPEARANCES OF MERCURY DURING THE YEAR 1851.

Scale, 40 seconds of arc to one inch.

And the appearances of the planet will be intermediate between these times.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Morning.	Mars. Morning.	Jupiter. Afternoon	Saturn. Morning.	Neptune. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H M.
1	1 32	11 33	7 26	2 42	3 32	12 3
6	1 20	11 37	7 20	2 26	3 12	11 41
11	1 0	11 40	7 13	2 10	2 52	11 19
16	0 30	11 44	7 6	1 54	2 31	10 59
21	Morn.	11 47	6 59	1 38	2 11	10 38
26	11 13	11 50	6 52	1 22	1 50	10 18
30	10 58	11 52	6 46	1 9	1 33	10 2

JUPITER'S SATELLITES.

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
28 Sagittarii	6	4 8 29 P.M.	Dark	19° N. &
		4 9 50 P.M.	Bright	67° N.
A Star	4	14 10 20 P.M.	Bright	8° N. &
		14 11 16 P.M.	Dark	90° N.
63 Tauri	6	16 10 20 P.M.	Bright	27° N. &
		16 11 15 P.M.	Dark	90° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

First Quarter	2d.	1h.	53m.	P.M.
Full Moon ..	10	1	44	P.M.
Last Quarter	18	1	29	P.M.
New Moon ..	25	6	12	A.M.
Apogee ..	10	4		P.M.
Perigee ..	24	10		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination North.	Mars. Right Ascension	Mars. Declination North	Jupiter. Right Ascension	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	12h. 13m	4° 44′	10h. 13m	12° 27′	6h. 6m	22° 35′	13h. 22m	7° 30′	2h. 11m	10° 24′	2h. 9m	12° 26′	22h. 39m	9° 25
6	12 20	6 14	10 36	10 15	6 19	23 36	13 26	7 52	2 11	10 20	2 8	12 24	22 39	9 28
11	12 19	6 35	11 0	7 57	6 33	23 34	13 29	8 14	2 10	10 15	2 8	12 22	22 39	9 31
16	12 10	5 22	11 23	5 33	6 45	23 28	13 33	8 36	2 9	10 10	2 7	12 19	22 38	9 33
21	11 53	2 34	11 46	3 4	6 58	23 18	13 37	8 59	2 8	10 3	2 7	12 16	22 38	9 36
26	11 38	North.	12 9	0 34	7 10	23 6	13 41	9 21	2 7	9 56	2 6	12 13	22 37	9 40

SEPTEMBER.

See how the well-taught pointer leads the way:
The scent grows warm—he stops—he springs the prey;
The fluttering coveys from the stubble rise,
And on swift wing divide the sounding skies.
Not closest coverts can protect the game:
Hark! the dog opens—take thy certain aim.
The woodcock flutters—how he wavering flies!
The wood resounds—he wheels, he drops, he dies!

GAY'S *Rural Sports.*

SEPTEMBER is a sad or a cheerful month, according to the feelings with which the eye looks out upon it. The silent harvest-fields may recal a deserted banquet-hall, through which the solitary guest walks on the following morning, and contrasts its loneliness with the life and stir and joyous happiness which reigned there on the previous night. Such, on a dull rainy day in this month, appear the dreary harvest-fields, amid the stubble of which the swine are grunting and rooting, and the geese gabbling and feeding. You no longer hear the shrill silvery laugh of the rustic maiden, which sounded so merrily when, while reaping or gleaning, love and labour went hand in hand, as she jested with her sun-burnt swain. The creaking wagon and the jingling harness are gone: a broken bottle where the last "stouk" stood, is all that tells you of healths pledged in brown home-brewed ale; and a few straggling ears which the birds have emptied, hanging on the withering hedges, are the only melancholy relics of the happy harvest. The rain patters on the hips and haws, and poisonous berries of the nightshade; and instead of the beautiful way-side flowers, you see now only the brown dry seed-vessels, that droop their heads, and seem to wait anxiously for the autumn winds to blow them abroad, the fallen leaves to bury them, and the dead-sounding rain to beat upon their graves. On some low, damp, swampy waste you see a few solitary corn-sheaves standing, which no sun could ever reach to ripen, but which were cut while green and small, when all the upland crops were ripe and golden; and these have been rained and blown upon, and now stand black and rotten on that swampy and sunless spot, while the poor proprietor sits sighing and shivering with the ague in the ruinous hovel at the end of his blighted field. This is the dark side of the scene.

Turn we now to bright, sunny September, with a sky as blue and clear as ever hung over Italy; while the trees, in all the richest dyes of Autumn, hang like curtains of crimson and gold and purple and green along the woodlands, where the voices of the merry nutters are heard, while in the hidden windings of the lane we hear the prattle of children busy blackberrying. Or glance at the hop grounds, where Summer songs are yet chanted over the last of out-door labour which all can share in, and then September becomes a joyous month.

It is the soul that sees; the outward eyes
Present the object, but the mind descries;
And thence delight, disgust, or cool indifference rise.
When minds are joyful, then we look around,
And what is seen is all on fairy ground:
Again they sicken, and on every view
Cast their own dull and melancholy hue.

The above extract is from "nature's sternest painter," Crabbe; and finely does he preach from this text in that splendid poem entitled "The Lover's Journey." In love, and happy with himself and all around him, Orlando starts out to visit Laura, and his journey lies through a miserable country; but he is in such a state of happiness, that he pronounces everything he sees beautiful. He rides over a barren heath, and is in raptures with the ling, and gorse, and cup-moss, the scarlet tinge of which he compares to Laura's lip. Onward he goes through lanes of "burning sand" and thin crops of withered rye, variegated by the waste-loving poppy; and although the very lines seem to fill your throat with dust, and to make you thirsty while reading, in his eyes the scenery is lovely. He reaches a common "wild and wide," on which a few half-starved, dirty, black-legged sheep are feeding on the "meagre herbage;" and though he sees nothing except a few "scattered hovels" and "brown, square stacks of turf," with a mill, a smith's shop, and a low roadside inn, yet he joyously exclaims, "Ay, this is nature!" He next comes to a "level fen, with dykes on either hand," that roll "through sloping banks of slimy mud," in which a rotten boat is sunk. There is no vegetation in this desolate place, saving "sharp rushes, salt lavender, dark sallows, and the slimy marsh-mallow;" the sounds are the rush of the muddy water, and the roar of the sea—neither tree nor hedge to keep off the sun; yet, with all

these marsh vapours curling and reeking around him, and poisoning the air, he exclaims :—

All that grows has grace;
All are appropriate: bog, and marsh, and fen,
Are only poor to undiscerning men.

So he goes on admiring everything, until he reaches the end of his journey, and learns that Laura has gone. She has, however, left a letter, and he must follow her. This time his way lies through a beautiful country, but in his eyes it is hateful—he is disappointed and displeased with everything he sees. The scene beside the river is one of the most beautiful bits of pastoral painting in all Crabbe's poems. This we have not space to extract, our object being to make our readers acquainted with the lover's feelings; and then he breaks out :—

I hate these scenes!
And those proud farmers!—yes, I hate their pride!
See that sleek fellow, how he strides along—
Strong as an ox, and ignorant as strong!
Can you close crops a single eye detain
But his, who counts the profits of the grain?
And these vile beans, with deleterious smell,
Where is their beauty?—can a mortal tell?
These deep fat meadows I detest: it shocks
One's feelings there to see the grazing ox
For slaughter fatted; as a lady's smile
Rejoices man, and means his death the while.
* * * * * *
I hate these long green lanes—there's nothing seen
In this vile country but eternal green.
Woods! waters! meadows! will they never end?
'Tis a vile prospect——Gone to see a friend!

What a fine dramatic touch is that abrupt turn of thought from the landscape to Laura—"Gone to see a friend!" And so he goes on, grumbling and finding fault with all he sees, until he arrives at the house where Laura is visiting, &c.

As Shooting commences in September, we shall, in accordance with the plan we have adopted throughout this year's Almanack, take a rapid survey of the feathered game which affords the sportsman amusement during the present and the following months; commencing with Grouse-Shooting, which begins in August.

We commence with black-grouse, or the blackcock, which is, we believe, "Royal game." This bird is seldom found in any quantity except in Scotland, where it frequents moist covers and lower situations than that chosen by the red-grouse, for the latter is fond of heaths and moorlands where the berries of ling are plentiful. The red-grouse is a true British bird, and is said never to be found on the Continent. Once it was plentiful in Yorkshire, and above forty brace have been shot by one man by the noon of day: though a few are yet found there, Scotland is the chosen residence of this much-coveted bird. There are some extensive moors in Westmoreland where grouse abound, many of these wilds stretching to a distance of thirty or forty miles; and unless a stranger has a keen eye and a retentive memory of landmarks, he will be likely enough, while shooting in these solitudes, if he is not provided with a pocket-compass, when night comes, to take up "his lodging on the cold ground," if he ventures too far without a guide. The ptarmigan or white-grouse is only to be met with in the Highlands of Scotland, appearing to be fond of cold situations: its flavour is considered inferior to that of the red-grouse. The grouse localities in Scotland let for high rentals, nor are they always well stocked. There have been loud clamours lately respecting a deficiency of game; nor do we think the facility of railway travelling at all likely to lessen the outcry, for hundreds will, no doubt, now rush to the moors, whom time and the expense of the journey formerly kept at home.

To those who are wealthy, and can afford to encamp on the Scottish moors, attended by their servants, and surrounded with all the "good things" conducive to the comforting of the outer and inner man, grouse-shooting is most princely amusement. There they can "eat, drink, and make merry," take healthy exercise by day, and enjoy sound sleep under their canvass roof at night, without experiencing any greater trouble than that of a bad day's sport. Splendid hunting grounds are those wild and pathless moors, where the eagle is seen wheeling overhead, and the stag standing sentinel on some lofty summit, as his antlered forefathers did a thousand years ago.

But to come to the practical. Daniel recommends "the old English spaniel or setter, in preference to the smooth pointer, in shooting red-grouse; they are better nosers, and their feet are defended by their long hair from the ling, which in dry weather cuts like wire." A cold rainy season is unfavourable for grouse, as the birds do not pair so freely. The best time to find them on their feeding grounds is in the morning; when having gorged their fill they fly away to little knolls, and sheltering banks on which the sun shines, and there, half-hidden by the heather, they stand and preen themselves or doze away the hours. But little sport is to be had in the middle of a very hot day; although when the morning has been misty, and it clears off, the birds will again begin to feed, especially if in a locality where plenty of berries grow. Many who have gone out grouse-shooting for the first time, have been greatly disappointed at finding that the birds are far from easy to hit. They have not been prepared for that perpendicular rising to an altitude of twelve or twenty yards before the bird made off in a straight course; nor have they understood catching him in what is called the "outward-turn." Colonel Hawker says, "For shooting grouse, select a fine sunshiny day, from about eight till five in August or September, and from about eleven till three at the latter period of the season, as they are then extremely wild, and will only lie tolerably during the few hours which are favoured by a warm sun. Unless the weather is very fine, you will see them running and getting up five hundred yards before you. In this case let one person take an immense circle, so as to head them, while the others remain behind, to press them forward when he is ready: and, above all things, you should, for killing them at this time of the year, use either No. 1, 2, or 3 shot, in the largest single gun that you can possibly manage. Grouse take a harder blow than partridges, and do not fly quite so regular and steady."

In partridge-shooting, a sportsman, if at all acquainted with the ground, generally knows where to "prick" for his coveys, having often watched where the birds alight and feed. Once on the spot, if game be pretty plentiful, it will not be long before the dogs are seen stationary and "mute as marble." The marker will also have his eye on the scattered covey the moment the trigger is pulled, though sometimes, after alighting, they will run fifty or one hundred yards through the stubble, but this will not mislead you, if your dogs and men understand their work. Sometimes a covey parts, and if you have two dogs they will each follow a division, and then point their own game: then you

Must make yourself happy with either;

but be sure to decide on one, "while the other dear charmer's away." No true sportsman will follow the same birds many times in one day, but allow them to rest and recover themselves from the alarm, for they soon regain confidence, and rarely fly their haunts for long, for the loss of a member or two of the family. The old birds, though, are regular "artful dodgers," and a sportsman stands the best chance when they have gone out for a holiday, and left the young ones to enjoy themselves at home. The sight of a bird of prey breaks a covey into more pieces than the report of a gun, for then every one seems to look out for himself, and creeps into the first hole or corner it can find. To conclude, partridges shelter everywhere.

Although pheasant-shooting has not yet commenced, it is so closely allied to grouse and partridge-shooting, as to fall in regular succession. All know that the pheasant is a beautiful bird, and his eyes look as if they were set in rubies, so richly coloured is the scarlet rim with which they are encircled; while a dark patch of purple feathers relieves them underneath. The head and neck assume such a variety of gaudy hues, when seen in the shifting light, that it is almost impossible to tell where the blue or purple begins, or the rich, ever-varying green ends. Sometimes we have seen this beautiful bird flying across an open glade, in the sunshine, and, as the blaze of light fell upon it, the plumage was tinged with every imaginable hue of gold and green and purple and violet and crimson, barred and flecked and speckled with rich umbery brown and glossy black—far more splendid than the mingled tints of the rainbow. When the King of Lydia was seated on his golden throne, and covered with priceless jewels, he asked the wise Solon, if he had ever beheld anything that equalled the splendour with which he was surrounded? "The plumage of the pheasant excels it all," answered the great philosopher.

Yet, against this beautiful bird, almost more than any other, is brought the murderous system of battue-shooting. We do believe that many English gentlemen have set their faces against this unfair practice of sporting, of late, which is really no better than converting the woods and preserves into a wholesale slaughter-house. The poor birds have no chance of escaping, when a dozen barrels are aimed at them from every direction. It is as cruel a system, in our eye, as the once barbarous custom of pinning a cock to the ground at Shrove-tide, and shying at it with heavy sticks. If the bird is missed by one, it is sure to be hit by another—like the poor pigeons in the shooting matches in Battersea-fields, who are waylaid in every direction, and fired at by every Cockney snob that can pull a trigger.

There is something very startling to a novice in the flushing of a pheasant, the first time he takes aim at it, and there is great odds against his hitting the bird, for its manner of rising is unlike that of any other feathered game—so sudden is the spring, so loud the noise, so unexpected the rattle and rustle of the branches and dead leaves it sweeps through, that we have seen men of iron nerves start aside when the silence of the deep woods has been all at once broken by the unexpected "whirr" of the pheasant. One of our humorous contemporaries has described it as a sudden display of fireworks, which, if such a thing were to be met with suddenly in the gloomy glen of some dark old forest, would, we think, cause the bravest of us to take to our heels, and leave a certain nameless old gentleman to "take the hindmost."

Spaniels broken in for pheasants ought never to be allowed to spring any other game. If they are not broken from questing other game, says Daniel, "they disturb the pheasants, who just fly up and perch upon the lower boughs; and the ground of the covert is in vain traversed and beaten for birds that are already some yards above it." On very wet mornings pheasants frequently quit the woods, and shelter in the neighbouring fields, annoyed, as some believe, by the continual "drop, dropping" of the rain from the leaves. "A foggy day," says Blaine, "is not unfavourable to pheasant-shooting, and the birds then stray abroad, and rove to considerable distances. Nevertheless, we have always observed that on these days pheasants are doubly alert with their ears; consequently, springing spaniels are not good to quest with. . . . . On the contrary, when a very bright day shines overhead, having tried the morning feeding-grounds, we would advise the gunner to scour the woods well. . . . . The morning's scent, also, when almost evaporated, makes it necessary that yourselves, dogs, and beaters should hunt the closer. Try every part of the cover; pheasants are capricious; but in the forenoon are often found under the bushes and brambles, which frequently surround the larger trees of the forest."

FREDERICK WILLIAM IV., KING OF PRUSSIA, BORN OCTOBER 15, 1795; ASCENDED THE THRONE JUNE 7, 1840.

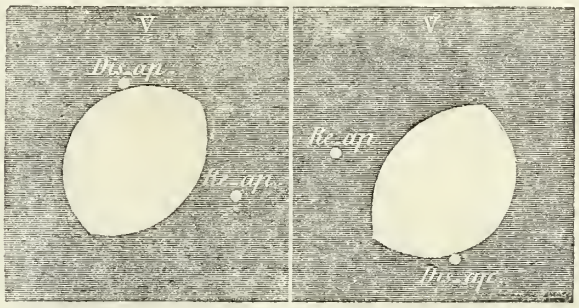
M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'clock	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Afternoon	MOON. Souths. Height above horizon	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. 2h. 4h. 5h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. 7h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	W	*Remigius.* Phst.	6 1	10 12	35 1/2	5 40	1 29	5 36	16	9 41		6		6 0	6 20	274
2	Th	[shooting begins	6 3	10 31	35	5 38	2 23	6 28	16	10 34		☽		6 45	7 16	275
3	F	*Old St. Matthew*	6 5	10 49	34 3/4	5 35	3 10	7 19	17	11 33		8		7 50	8 30	276
4	S	Length of night 12h 53m	6 7	11 8	34 1/4	5 32	3 45	8 7	19	Morning.		9		9 10	9 55	277
5	S	16TH S. aft. TRIN.	6 9	11 26	34	5 29	4 15	8 53	21 3/4	0 34		10		10 40	11 20	278
6	M	*Faith*	6 10	11 44	33 1/2	5 27	4 40	9 37	25 1/4	1 38		11		11 55	No Tide.	279
7	Tu	Alpha Lyræ souths 5h 29m P.M.	6 12	12 1	33 1/4	5 24	5 1	10 20	29 1/2	2 44		12		0 20	0 45	280
8	W	Length of day 11h. 6m.	6 14	12 18	32 3/4	5 22	5 20	11 2	33 3/4	3 49		13		1 5	1 25	281
9	Th	*St. Denys* [beg	6 15	12 35	32 1/2	5 20	5 38	11 43	38 1/4	4 53		14		1 40	1 55	282
10	F	Oxf. and Cam. T.	6 17	12 51	32	5 18	6 4	Morning.	—	5 59		●		2 10	2 25	283
11	S	Old Michael. Day	6 19	13 6	31 3/4	5 15	6 16	0 25	43	7 6		16		2 40	2 55	284
12	S	17TH S. aft. TRIN.	6 20	13 22	31 1/4	5 13	6 39	1 8	47 1/2	8 13		17		3 10	3 25	285
13	M	Fire Insur. due.	6 22	13 36	30 3/4	5 10	7 3	1 53	51 3/4	9 21		18		3 40	3 55	286
14	Tu	Translation of Edward the Confessor	6 24	13 50	30 1/2	5 8	7 34	2 40	55 1/4	10 29		19		4 10	4 25	287
15	W	Alpha Aquilæ souths 6h 9m P.M.	6 25	14 4	30	5 6	8 13	3 30	58	11 35		20		4 40	5 0	288
16	Th	Alpha Cygni souths 6h 57m P.M.	6 27	14 17	29 3/4	5 4	9 1	4 23	59 1/2	Afternoon		21		5 15	5 35	289
17	F	*Etheldreda*	6 28	14 30	29 1/2	5 2	10 0	5 18	60	1 34		22		6 0	6 25	290
18	S	*St. Luke*	6 30	14 41	29	5 0	11 9	6 14	59 1/4	2 22		☾		6 50	7 25	291
19	S	18TH S. aft. TRIN.	6 31	14 53	28 3/4	4 58	Morning.	7 11	57	3 2		24		8 5	8 50	292
20	M	Bat. of Nav., 1827	6 32	15 3	28 1/4	4 56	0 24	8 7	53 1/4	3 35		25		9 35	10 20	293
21	Tu	Bat. of Traf., 1805	6 34	15 13	28	4 54	1 45	9 2	48 1/2	4 3		26		11 5	11 35	294
22	W	[Nelson killed	6 36	15 22	27 1/2	4 52	3 9	9 56	43	4 27		27		No Tide	0 5	295
23	Th	Length of day 10h 12m	6 38	15 31	27 1/4	4 50	4 33	10 50	37 1/2	4 56		28		0 30	0 55	296
24	F	[*St. Crispianus*	6 40	15 39	26 3/4	4 47	5 59	11 44	30 1/4	5 16		○		1 20	1 40	297
25	S	*St. Crispin and*	6 42	15 46	26 1/2	4 45	7 23	Afternoon	26 1/4	5 40		1		2 0	2 25	298
26	S	19TH S. aft TRIN.	6 44	15 52	26 1/4	4 43	8 46	1 33	21 1/4	6 11		2		2 45	3 10	299
27	M	Fomalhaut souths 8h 27m P.M.	6 46	15 58	25 3/4	4 41	10 3	2 29	18 1/4	6 47		3		3 30	3 50	300
28	Tu	*St. Simon. St. Jude*	6 48	16 3	25 1/2	4 39	11 15	3 25	16 1/4	7 32		4		4 10	4 30	301
29	W	Alpha Pegasi souths 8h 27m P.M.	6 50	16 7	25 1/4	4 37	Afternoon	4 19	15 1/2	8 21		5		4 50	5 10	302
30	Th	Alpha Andromadæ souths 9h 26m P.M.	6 51	16 11	24 3/4	4 36	1 7	5 12	16 1/4	9 20		6		5 35	5 55	303
31	F	Length of night 14h 25m	6 53	16 14	24 1/2	4 34	1 47	6 2	17 1/2	10 23		☽		6 20	6 45	304

OCTOBER.

The Sun is situated south of the Equator, and is moving south. On the 24th day, at 0h. 5m. A M., he passes from the sign Libra to Scorpio (the Scorpion), having been in the former sign 30 days, 8 hours, 14 minutes. On the 1st day he is 95,048,000 miles distant from the Earth. He rises and sets on the 11th, at the E. by S. and W. by S. points of the horizon.

The Moon is in the constellation Sagittarius till the 3rd, on which day she enters Capricornus; on the 5th Aquarius; on the 7th Pisces; on the 10th Cetus; on the 11th Aries; on the 13th Taurus; on the 15th Orion; on the 16th Gemini; on the 18th Cancer; on the 19th Leo; on the 21st Virgo; on the 24th Libra; on the 25th Scorpio; on the 26th Ophiuchus; on the 28th Sagittarius; and on the 30th Capricornus.

OCCULTATION OF DELTA 1 TAURI BY THE MOON, OCTOBER 14, 1851, AS SEEN THROUGH A TELESCOPE WHICH



Does not invert. Does invert.

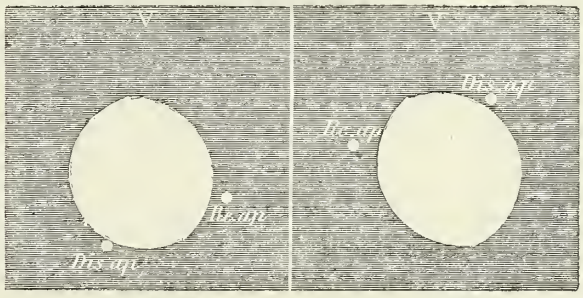
The star will disappear at the bright limb of the Moon at 5h. 57m. and re-appear at the dark limb at 6h. 55m. in the morning.

She is above the horizon when the Sun is below, during the morning hours from the 8th to the 26th; the evening hours from the 1st to the 20th, and after the 27th.

She is at her extreme south declination on the 2nd; is on the Equator on the 9th; at her extreme north declination on the 16th; on the Equator on the 23rd; and at her extreme south declination on the 30th.

She is near Saturn and Uranus on the 11th; Mars on the 18th; Mercury on the 23rd; Jupiter and Venus on the 24th.

OCCULTATION OF XI 2 CETI BY THE MOON, OCTOBER 11, 1851, AS SEEN THROUGH A TELESCOPE WHICH



Does not invert. Does invert.

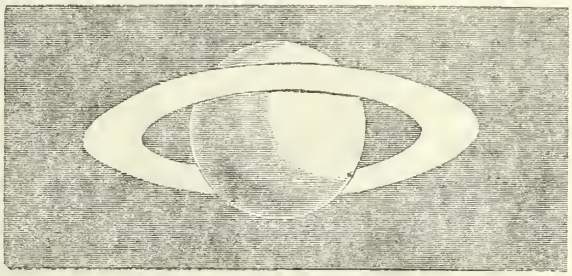
The star disappears at the bright limb of the Moon at 7h. 17m. and re-appears at the dark limb at 8h. 2m. in the evening.

Mercury is in the constellation Virgo throughout the month.

He both rises and sets before the Sun throughout the month: he is a morning star, rising at 4h. 36m. on the 1st; at 4h. 25m. on the 7th; at 4h. 56m. on the 16th; and at 6h. 24m. on the last day. He is favourably situated for observation before sun-rise, particularly between the 4th and 12th. He rises till the 20th near the E., and on the 25th, at the E. by S. points of the horizon. He is moving eastward among the stars throughout the month; is at his greatest western elongation on the 7th; and is near the Moon on the 23rd. His path among the stars is shewn in the diagram in next month.

Venus is in the constellation Virgo till the 24th; and in Libra from the 25th to the end of the month. She rises and sets at nearly the same times as the Sun, and is therefore unfavourably situated for observation. She rises and sets near the E. and W. points of the horizon on the 1st day; at the E. by S. and W. by S. on the 11th; and at the E.S.E. and W.S.W. towards the end of the month. She is moving eastward among the stars; is near Jupiter on the 20th, and the Moon on the 24th. For her path among the stars, see the diagram in the month of December, in which, on the 20th day, her place among the stars will be found to be almost identical with that occupied by Jupiter on the same day (see diagram in June), and therefore these two planets are nearly together on this day.

TELESCOPIC APPEARANCE OF SATURN IN OCTOBER, 1851.

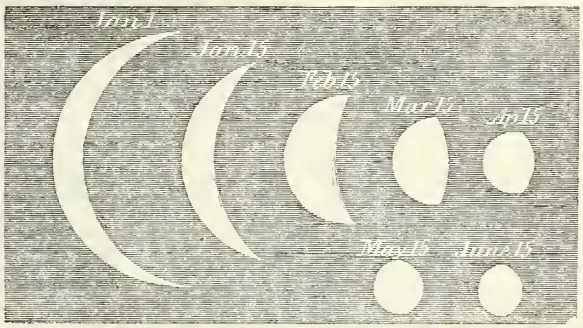


Scale, 20 seconds of arc to one inch.

Mars is in the constellation Gemini to the 13th; and in Cancer from the 14th to the end of the month. He is visible throughout the night, after rising on the 3rd, at 10h. 29m. P.M., and on the 27th, at 9h. 55m. P.M., near the N.E. by N. point of the horizon. He is moving eastward among the stars, and is near the Moon on the 18th. See his path among the stars in the diagram inserted in last month.

Jupiter is in the constellation Virgo throughout the month. He rises and sets at nearly the same time as the Sun, and he is not favourably situated for observation. He moves slowly eastward among the stars; and is near the Moon on the 24th. See the diagram in June for his path among the stars. He is near Venus on the 22nd.

TELESCOPIC APPEARANCES OF VENUS DURING THE YEAR 1851.



Scale, 40 seconds of arc to one inch.

The appearance of Venus during the remainder of the year will be that of a circle, somewhat less diameter than that of June 15.

(*Continued on page* 45.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Morning.	Jupiter. Afternoon	Saturn. Morning.	Neptune. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	10 55	11 53	6 44	1 6	1 29	9 53
6	10 45	11 56	6 36	0 51	1 8	9 38
11	10 48	11 59	6 27	0 35	0 47	9 18
16	10 54	Aftern.	6 18	0 19	0 26	8 58
21	11 5	0 7	6 8	0 4	0 5	8 38
26	11 16	0 11	5 58	Morn.	Aftern.	8 22
31	11 27	0 16	5 48	11 33	11 18	7 58

JUPITER'S SATELLITES.

Eclipses of

Are not visible, Jupiter being too near to the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Stars.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
A Star 6607	6	2 5 45 P.M.	Dark	16° N. &
		2 7 7 P.M.	Bright	67° N.
Xi 2 Ceti	4	11 7 17 P.M.	Bright	35° N. &
		11 8 2 P.M.	Dark	90° N.
13 Delta 1 Tauri	4	14 5 57 A.M.	Bright	9° S. &
		14 6 55 A.M.	Dark	60° N.
Chi 1 Orionis	5	15 9 19 P.M.	Bright	46° N. &
		15 9 25 P.M.	Dark	90° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

First Quarter	2d.	2h.	30m.	A.M.
Full Moon ..	10	6	33	A.M.
Last Quarter	18	0	13	A.M.
New Moon ..	24	3	10	P.M.
First Quarter	31	7	18	P.M.
Apogee ..	7	7		P.M.
Perigee ..	23	8		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination North	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination South	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	11h. 33m	3° 4′	12h. 31m	1°59′	7h. 22m	22°51′	13h. 45m	9° 44′	2h. 6m	9°49′	2h. 5m	12° 9′	22h. 37m	9° 42′
6	11 43	3 16	12 54	4 30	7 33	22 34	13 49	10 7	2 4	9 41	2 5	12 6	22 37	9 44
11	12 4	1 35	13 17	6 59	7 45	22 15	13 53	10 30	2 3	9 33	2 4	12 2	22 36	9 46
16	12 32	South	13 41	9 25	7 55	21 58	13 57	10 53	2 1	9 25	2 3	11 58	22 36	9 48
21	13 2	4 40	14 4	11 45	8 5	21 34	14 1	11 16	2 0	9 17	2 2	11 53	22 35	9 51
26	13 33	8 12	14 28	13 59	8 15	21 11	14 5	11 39	1 58	9 9	2 2	11 49	22 35	9 52

OCTOBER.

Now, Autumn comes in solemn gold,
And on the earth the flowers are strown;
The trees are thin and bare, and cold;
The clouds above the landscape frown:
'Tis dreary on the lonesome wold,
But cheerful on the mountain brown,
Where stands the deer with antler'd head.
Hectic, and grey, and green, and red,
Are the dead leaves on which we tread.—DUNSTAN DORMOUSE.

OCTOBER comes like the first battalion of the enemy from the yet distant army of Winter, and forages the borders of the land, stripping the trees of their foliage, to make room for the march of all his millions of flaky followers of snow and hail, who, in a few weeks more, will be moving from their frosty quarters in the north. The advanced guard already go howling through the land, and the trees roar and moan in their great agony, seeming to writhe with pain and anger while stripped of their leafy covering, and striking with their gnarled branches as if endeavouring to beat back their destroyers. Where the violets bloomed, and the yellow primroses lay like smiling faces on the sward, the dead brown leaves are gathered in heaps, as if, weary of endeavouring to escape further from the enemy, they had made a sullen halt, lain down and perished together. Where the blackbird, and linnet, and thrush stood and answered each other amid the "embowered green," the wind now pipes through the naked branches, and the round rain-drops rattle on the bare skeletons of Summer. By the bank-sides, where the flowers blowed, and the bee hummed, and the wing-folded butterfly balanced itself upon the blossoms, the long grass hangs wan and withered, bowed down by the wet rotting leaves and the crumbling earth which slips away from the dead roots. The Summer band of birds has departed from the woodland theatre, and gone over the seas; and the robin sits humming a dirge among the empty stalls and boxes, as if he were alone—the sole occupier of the mansion they have deserted. The brooks no longer roll along with gentle murmur, but come tearing and chasing down the hill-sides, as if angry at having to drag along with them the heavy rain-torrents, and seeking in vain to escape from the bursting clouds.

"What a blessed order of nature it is," says Professor Wilson, "that the footsteps of time are 'inaudible and noiseless,' and that the seasons of life are like those of the year, so indistinguishably brought on, in gentle progress, and imperceptibly blended the one with the other, that the human being scarcely knows, except from a faint, and not unpleasant feeling, that he is growing old. The boy looks on the youth, the youth on the man, the man in his prime on the grey-headed sire, each on the other, as on a separate existence in a separate world. They seem sometimes as if they had no sympathies, no thoughts in common, that each smiled and wept on account of things for which the other cared not, and that such smiles and tears were all foolish, idle, and most vain; but as the hours, days, weeks, months, and years go by, how changes one into the other, till, without any violence, lo! as if close together at last, the cradle and the grave! In this how Nature and Man agree, pacing on and on to the completion of a year—of a life! The Spring, how soft and tender indeed, with its buds and blossoms, and the blessedness of the light of heaven, so fresh, young, and new; a blessedness to feel, to hear, to see, and to breathe. Yet, the Spring is often touched by frost, as if it had its own Winter, and is felt to urge and be urged on upon that Summer, of which the green earth, as it murmurs, seems to have some secret forethought. The Summer, as it lies on the broad-blooming bosom of the earth, is yet faintly conscious of the coming-on of Autumn with 'sere and yellow leaf'—the sunshine owns the presence of the shade—and there is at times a pause, as of melancholy amid the transitory mirth. Autumn comes with its full or decaying ripeness, and its colours grave or gorgeous, the noise of song or sickle, of the wheels of wains, and all the busy toils of prophetic man gathering up against the bare cold Winter provision for the body and for the soul. Winter! and cold and bare as fancy pictured, yet not without beauty and joy of its own, while something belonging to the other seasons that are fled, some gleanings as of Spring-light, and flowers fair as of Spring among the snow-meridians, bright as Summer morns, and woods bearing the magnificent hues of Autumn on into Christmas frost, clothe the Old Year with beauty and with glory not its own; and just so with old age, the Winter, the last scene of man's ever-varying, yet never wholly changed life."—(*Blackwood's Magazine*, June, 1828.)

Having, in a former Number of the ILLUSTRATED LONDON ALMANACK, dwelt upon the winter-sleep of animals, and the provision many of them make against this dreary season, I shall now describe more fully than I have hitherto done the habits of the bats, the most curious of all our British quadrupeds, and still believed to be birds by many of the simple country-

people, who have no idea that they bring forth their young alive, and suckle them. Who has not seen the bat flitting by of a summer evening in pursuit of insects, in the dim and purple twilight, sometimes skimming along so low as to be within a few feet of the ground? We had an old rhyme, when boys, which we repeated as we tried to capture this leather-like winged little animal—hat in hand—which was,

Bat, bat, come under my hat,
And I'll give you a flitch of bacon.

We did not then know how it concealed itself in winter; but looked upon it as a kind of winged mouse; nor can I spell the name nearer that we called it by than that of "devil-dewlin"—a name for which I can discover no origin beyond that of this little quadruped bearing some resemblance to Old Harry, as we find him represented in our old books. During the winter months the bats enter eaves, old churches, hollow trees, or any other dark solitary place, and hanging on by the claws of their hinder-legs, head downwards, sleep away the hours until Spring again appears. In this manner will dozens hang together, one lapping over the other, like the scales of fishes. Wings is hardly a proper term for the membranes by which the bat is enabled to fly: so differently constructed are they from the wings of birds, that an eminent naturalist has compared them to the silk stretched upon the ribs of an umbrella; nor are the fingers which support this leathery membrane, and which the bat can open or close when it pleases, unlike, in construction, the whalebone and covering of an umbrella so far as regards the machinery by which it is opened and shut. That which appears like the arm or hand of the wing, and which when opened enables the bat to fly, has a hooked nail, or thumb, as it is called, by the aid of which it walks both on the ground and up any steep ascent, no matter how perpendicular it may be, providing it is rough enough to enable the bat to hold on by this hooked thumb. But we know of no animal that walks so ungainly as the bat: these hooks act as levers, and by their aid it lifts itself along—it is unlike the motion of any other living object that we are acquainted with.

Ugly as the bat is to look at, it is one of the cleanest of animals; it uses its little head as easily as we do a brush, and pokes about under its wings, and parts the hair down its back, and smooths and brushes it with as much pains as any fair maiden ever bestowed on her long silken ringlets. The bat is believed to have only a single young one at a time; she is a most careful and affectionate mother, and she will wrap up her little bantling in the hinder part of her membrane, and carry it with her. The bat has four ears, but what use she makes of the extra pair has not yet been clearly discovered. It is astonishing into what graceful folds the long-eared bat can throw its ears; and how it shuts them up when asleep, with not a vestige visible except what is called the tragus, or secondary ears. The horse shoe bat is without these secondary ears, while its nose is so intersected that it would baffle the best naturalist to describe it. Among the twelve species of bats already discovered are the notch-eared, long-eared, lesser long-eared, horse-shoe, mouse-coloured, parti-coloured, reddish grey, pigmy, whiskered, flitter-mouse, besides two others. The common bat, or flitter-mouse, is best known, and is almost as common a haunter of our houses as the sparrow, and may often be seen with its short ears "peaking' about under the eaves. Bats have been considered birds of ill-omen, for no other reason than that the old poets have chosen them as images to illustrate evil. We have, in a former Number of the ILLUSTRATED LONDON ALMANACK, interceded in behalf of the poor persecuted toads, and trust that what we have now written about bats, will cause them to be regarded with interest, and not wantonly destroyed. We know not how many millions of insects they rid us of.

Having before described the fox and the earth-stopper, I must now give a picture of Fox-hunting. It is an agreeable sight to witness the assembled horsemen riding leisurely up and down some extensive heath, beside the cover; or to see little groups rein up their horses, and conversing together; or to catch sight of a scarlet jacket a mile away—now seen, now lost by some winding of the road, high hedgerow, or clump of trees; or to gaze on the figure of some lovely lady—

The cynosure of neighbouring eyes—

as her palfrey ambles to and fro, while the dogs express their impatience by whining and looking up at the huntsman, who at last gives the signal, and exclaims "Eu-in, Eu-in there, dogs," and into the covert they leap, in all kinds of picturesque places—one by the withered fern, another by the stem of the mighty oak, some beneath the gorse bushes, others over the moss-covered railings, and all in a few moments lost to the eye, while the huntsman listens with his head aside for the opening cry of the hound which will first proclaim that Reynard is found. Mr. Beckford says:—"Many huntsmen are fond of having hounds at their horses' heels; and it is a modern fashion for the huntsman and whippers-in to ride into the cover, and by their noise, in some measure, to find the fox for their hounds; but this proceeding is apt to render hounds bad drawers, independent of the great chance of stubbing the horses, which, in a strong cover, too often occurs, without needlessly courting the danger. It is liable, also, where there are but few finders, to have a fox found by them which goes down the wind, and they are heard of no more that day. Besides, hounds never get so well or so soon together as when they spread the cover."

There can be but one opinion on this point; and if hounds will draw of themselves, it is the duty of every huntsman to save his horse from the sharp thornbushes, and the hooked brambles, and the piercing gorse, which tear the skin of a horse, enter his feet and legs, and make him restive all the day after. All eye, all ear, the head huntsman draws up beside the cover: he knows the voice of a skirter from that of a well-trained and stanch hound: all is for a time again silent; there is not a false babbler in the pack. Listen! now you hear them open! one bark is followed by another, then the whole pack joins in the cry, like the crash of a band of musicians. The fox is found, but he is in no hurry to start, though

He often takes leave, but is loth to depart;

for he must have a skulk or two somewhere, to mislead the hounds, and obtain a good start. Hark! that was the "Tally-ho! tua-loo! Away, away!" He is seen making off from the cover, and now the chase commences. The following is from one of my former works on the country:—

Now we see the first hound leap the low fence and clear the covert; he pauses for a moment, scents the spot, then throws back the joyous cry:

Another and another still succeeds,

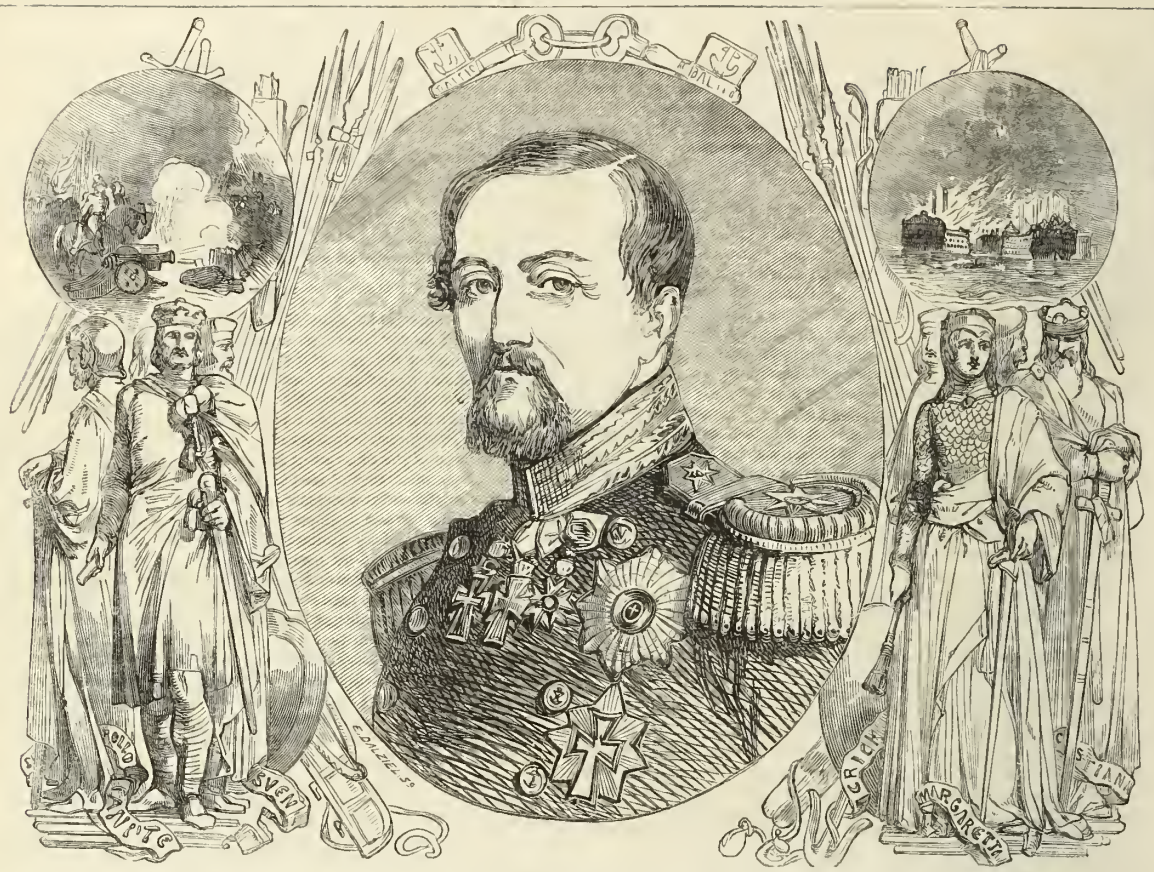
each having to his companion, who flings the tidings behind him, but has not time to stay, until, at last, the report reaches the farthest hound, and on they rush like a mob when the cry of "Stop thief!" is heard. Now the hounds are drawn together, and away they go over hedge and ditch, clearing everything at a bound; for the whippers-in have done their work well, and not a dog lingers in the wake. The head huntsman keeps well up with his leading hounds. Now the fat old Squire is thrown into the hedge, and one hardly knows which is the reddest—the hips of the wild-rose or his own "jolly nose." The young lady's veil has caught in the branch of the tree which overhung the hedge she cleared in such gallant style, and now streams out like a banner in the breeze. Now a new-booted young farmer attempts to clear a "nasty-looking fence," which every one hitherto has wisely shunned, and, like "vaulting ambition," he comes down head foremost, breaks his horse's knees, ploughs up the earth with his head, and gets laughed at for his fool-hardiness. Now the old farmer, who is at work in his fields, places his hands in his pockets, utters a few deep curses to himself, and mumbles something about broken necks, while calculating the cost of repairing the fences which the hunters have broken down. Now a group of famished pedestrians who came out to see the "hounds throw off," invade the first turnip-field they reach, and looking with hungry eye on the sheep, think of gipsies, wood fires, and huge pots suspended from three stakes, simmering gently in wild green lanes. Now little boys run to open gates for timid horsemen, and if a few pence are not thrown to them, begin to whistle long, low, desponding notes, and to kick about the dead leaves dreadfully. Now some old publican, whose house stands on a distant eminence, hopes that the fox may be killed near his door, or that some gentleman may be brought in with a broken collar-bone, whom it will be dangerous to remove for a month at least; he also reckons up the profit of a few British cheroots at threepence each, which cost him eight shillings a pound, then steps inside to add a little more water to the brandy in his decanter. Now a check occurs, at which some of the followers of the chase swear, while others feel thankful, as their horses were already blown. Some, who have lost their hats, tie handkerchiefs round their heads; and those who have been thrown, laugh very loud, though they look rather pale; and when they think they are not noticed, wince and writhe under hurts which they are ashamed to confess to. Now the gentleman who staked the hunter, which cost him one hundred guineas, comes up on foot, biting the end of his whip, while he exclaims "Devilish good sport to-day."

Gone away! in sad earnest the peals are commencing;
Here a farmer and steed promiscuously roll;
There a Leicestershire blade, on a glutton for fencing,
Takes a bullfinch and breaks a buck's neck in a hole.
My lad! pull that stake out—whoey! gently! od rot it,
(While the mare's in a fidget, the man's in a fright);
Do just stand aside, sir, and let me come at it.
Forward! forward! my boys! he's away to the right.

We must let Mr. Beckford come in at the death, which he does in true sporting style, as follows:—"Hark! they halloo! Ay, there he goes. It is nearly over with him; had the hounds caught view he must have died. He will hardly reach the cover; see how they gain upon him at every stroke! It is an admirable race; yet the cover saves him. Now he quiet, and he cannot escape us; we have the wind of the hounds, and cannot be better placed; how short he runs; he is now in the very strongest part of the cover. What a crash! every hound is in, and every hound is running for him. That was a quick turn! Again another; he's put to his last shifts. Now Mischief (the hound) is at his heels, and death is not far off. Ha! they all stop at once; all silent, and yet no earth is open. Listen! now they are at him again. Did you hear that hound catch him? they overran the scent, and the fox had laid down behind him. Now, Reynard, look to yourself; How quick they all give their tongues. Little Dreadnought, how he works him! the terriers too, they are now squeaking at him. How close Vengeance pursues; how terribly she presses; it is just up with him. What a crash they make! the whole wood resounds! That turn was very short. There! now! ay, now they have him. Whoo hoop!" The above description is excellent; you fancy as if you were at his elbow all the time—that he could see into the covert, and knew every dog by sight and name; and—and—after all you feel sorry for the poor fox.

After the fox is killed, he is generally seized by the huntsman, who cuts off his brush and feet; sometimes his head also; then throws his carcase to the hounds. Formerly, the body of the fox was suspended from the branch of some tree, at the foot of which the hounds congregated and chanted such a dirge round the dead body, as must have been very trying to the ears of a sensitive man. What a scramble is there amongst the hounds for the carcase; each one trying to seize a portion, yet finding it impossible to reach the poor fox, without first eating their way through their companions of the pack. The work of destruction seldom lasts beyond four or five minutes, and at the expiration of that period not a vestige of Reynard remains.

NOVEMBER.



FREDERICK VII., KING OF DENMARK, BORN OCTOBER 6, 1806; ASCENDED THE THRONE JANUARY 20, 1848.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises	SUN. Souths. Before 12 o'clock.	SUN. Souths. Height above horizon	SUN. Sets	MOON. Rises. Afternoon	MOON. Souths. Afternoon	MOON. Souths. Height above horizon.	MOON. Sets. Afternoon	DURATION OF MOONLIGHT. Before Sunrise. O'Clock 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock 6h 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	*All Saints*	6 56	16 15	24¼	4 32	2 20	6 50	20½	11 27		8		7 15	7 50	305
2	S	20TH S. aft. TRIN.	6 57	16 17	23¼	4 31	2 46	7 35	23¾	Morning.		9		8 35	9 15	306
3	M	Michaelmas Term begins. All Souls	6 59	16 17	23½	4 29	3 8	8 18	27¾	0 33		10		9 55	10 35	307
4	Tu	King Will. III. landed	7 1	16 17	23¼	4 27	3 26	9 0	32	1 38		11		11 10	11 45	308
5	W	Gunpowder Plot	7 2	16 16	23	4 26	3 45	9 41	36½	2 44		12		No Tide.	0 5	309
6	Th	*Leonard*	7 4	16 14	22½	4 24	4 2	10 23	41¼	3 48		13		0 30	0 50	310
7	F	Fomalhaut souths 7h 44m P.M.	7 6	16 11	22¼	4 23	4 22	11 6	46	4 55		14		1 5	1 20	311
8	S	Alpha Pegasi souths 7h 44m P.M.	7 7	16 7	22	4 22	4 43	11 50	50½	6 3		●		1 40	1 55	312
9	S	21ST S. aft. TRIN.	7 9	16 3	21¾	4 20	5 7	Morning.	—	7 10		16		2 10	2 25	313
10	M	[Lord Mayor's Day	7 10	15 57	21½	4 19	5 35	0 37	54¼	8 20		17		2 45	3 0	314
11	Tu	*St. Martin*	7 12	15 51	21¼	4 18	6 11	1 27	57¼	9 29		18		3 15	3 30	315
12	W	Cam. T. div. mid	7 14	15 41	20¾	4 16	6 56	2 19	59½	10 33		19		3 45	4 5	316
13	Th	*Britius*	7 16	15 36	20½	4 14	7 51	3 14	60¼	11 33		20		4 20	4 40	317
14	F	Alpha Andromadæ souths 8h 27m P.M	7 18	15 27	20¼	4 12	8 56	4 10	59¾	Afternoon		21		5 0	5 25	318
15	S	*Machutus*	7 20	15 18	20	4 11	10 9	5 5	58	1 3		22		5 50	6 15	319
16	S	22ND. S. aft. TRIN	7 22	15 7	19¾	4 10	11 26	6 0	55	1 38		◐		6 40	7 10	320
17	M	Hugh, Bis. Linc.	7 23	14 56	19½	4 9	Morning.	6 54	50¾	2 5		24		7 50	8 30	321
18	Tu	[Queen Elizabeth's acces.	7 25	14 43	19¼	4 8	0 48	7 47	45¾	2 31		25		9 15	9 55	322
19	W	Length of day 8h 40m	7 27	14 30	19	4 7	2 9	8 39	40	2 55		26		10 35	11 10	323
20	Th	Ed. King & Mar.	7 28	14 16	18¾	4 6	3 30	9 30	34¼	3 16		27		11 40	No Tide.	324
21	F	Princess Royal b.	7 30	14 2	18¾	4 5	4 52	10 23	28¾	3 41		28		0 5	0 30	325
22	S	*St. Cecilia*	7 31	13 46	18½	4 3	6 14	11 17	23¾	4 9		29		0 55	1 20	326
23	S	23RD S. aft. TRIN.	7 33	13 30	18¼	4 2	7 37	Afternoon	19¾	4 39		○		1 45	2 5	327
24	M	[Old Martinmas Day	7 35	13 13	18	4 0	8 53	1 9	17	5 19		1		2 25	2 45	328
25	Tu	Mich. Term ends	7 36	12 55	17¾	3 58	10 1	2 5	15½	6 7		2		3 10	3 30	329
26	W	*St. Stephen*	7 38	12 36	17½	3 57	10 58	3 0	14¼	7 3		3		3 50	4 10	330
27	Th	Princess Mary Adelaide born, 1833	7 39	12 17	17¼	3 56	11 45	3 53	16¾	8 6		4		4 35	4 55	331
28	F	Alpha Arietis souths 9h 31m P.M.	7 40	11 57	17¼	3 55	Afternoon	4 43	19	9 12		5		5 15	5 35	332
29	S	Length of night 15h 48m	7 42	11 36	17	3 54	0 48	5 29	22¼	10 18		6		6 0	6 20	333
30	S	ADVENT SUNDAY	7 44	11 14	17	3 54	1 14	6 14	26	11 24		☽		6 45	7 15	334

NOVEMBER.

The Sun is situated south of the Equator, and is moving south. He passes, on the 22nd day, at 8h. 42m. P.M., from the sign Scorpio to the sign Sagittarius, having been in the former sign 29 days, 20 hours, 37 minutes. On the first day his distance from the Earth is 94,228,000 miles. He rises and sets on the 1st at E.S.E. and W.S.W., and on the 27th, at the S.E. by E. and S.W. by W. points of the horizon.

The Moon is in the constellation Capricornus till the 2nd; on which day she enters into Aquarius, on the 3rd Pisces, on the 7th Cetus, on the 8th Aries, on the 9th Taurus, on the 12th Orion and Geminl, on the 14th Cancer, on the 15th Leo, on the 18th Virgo, on the 21st Libra, on the 23rd Scorpio and Ophiuchus, on the 25th Sagittarius, on the 27th Capricornus, and on the 29th she enters Aquarius.

She is above the horizon when the Snn is helow, during the morning hours, from the 6th to the 27th; the evening hours from the 1st to the 20th, and after the 26th.

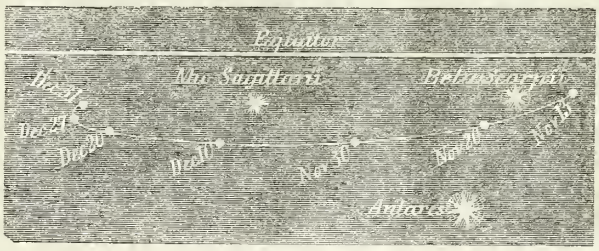
She is situated south of the Equator till the 6th; is at her extreme north declination on the 13th; is on the Equator on the 19th; and at her extreme south declination on the 26th; after which she moves northward.

She is near Satnrn and Uranus on the 7th; Mars on the 15th; Jupiter on the 21st; Mereury on the 23rd; and Venus on the 24th.

Mercury is in the constellation Libra till the 16th; in Scorpio from the 17th to the 20th; and in Ophinchns from the 21st.

He rises before the Sun till the 7th, and ho sets after him from the 8th; hut the times of rising and setting throughout the month are all within half an hour of the times of the Sun rising and setting, and he is therefore not favourably situated for observation. He rises on the 3rd, at the E.S.E.; and he sets on the 17th, at the S.W. by W. point of the horizon. He is moving eastward among the stars throughont the month; is near Jupiter on the 1st; in Aphelion on the 18th; and near the Moon on the 23rd. His path among the stars, from the 13th, is shewn in the annexed diagram. He is near Jupiter on the 1st.

PATH OF MERCURY FROM NOVEMBER 13 TO DECEMBER 31, 1851.



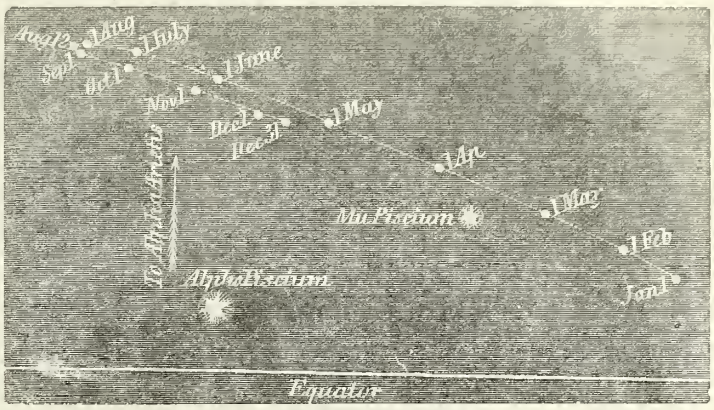
Scale, 24 degrees to one inch.

Venus is in the constellation Libra till the 11th; in Scorpio on the 12th, 13th, and 14th; and Ophiuchus from the 15th till the end of the month. She sets on the 1st, at 4h. 55m. P.M.; and on the last day, at 4h. 44m.; and she is not favourably situated for observation. She sets near the W.S.W. at the beginning, at the S.W. by W. on the 14th, and midway between this point and S.W. at the end of the month. She is moving eastward among the stars, and is near the Moon on the 24th. Her path among the stars is shewn in the diagram in next month.

Mars is in the constellation Cancer throughout the month. He is visible during the greater part of the night. He rises on the 2nd, at 9h. 43m. P.M., and on the 26th, at 8h. 18m. P.M., near the N.E. by N. point of the horizon. He is moving slowly eastward among the stars, and is near the Moon on the 15th. He souths at an altitude of 58½°, at about the middle of the month.

Jupiter is in the constellation Virgo till the 4th; and in Libra from the 5th to the end of the month. He rises some little time before the Sun on the 1st, at 6h. 28m. A.M.; and on the 26th, at 5h. 18m. A.M., near the E.S.E. point of the horizon. He moves slowly eastward among the stars, and is near the Moon on the 21st. His path among the stars is shewn in the month of June; he is near Mercury on the 1st.

PATH OF SATURN DURING THE YEAR 1851.



Scale, 6 degrees to one inch.

Saturn is in the constellation Cetus throughout the month. He is visible throughout the night, and sets on the 1st at 6h. 4m. A.M., and on the 26th at 4h. 16m. A.M., near the W. by N. point of the horizon. He souths at an altitude of 47° on the 15th. He moves slowly westward among the stars, and is near the Moon on the 7th. His path among the stars during the year is shewn in the above diagram.

Uranos is in the constellation Aries throughout the month. He rises on the 1st at 4h. 10m. P.M., and sets at 6h. 18m. A.M.; and on the last day he sets at 4h. 21m. A.M. He souths on the 1st, at 11h. 18m. P.M.; and on the 30th, at 9h. 20m. P.M.

Neptone sets on the 1st at 1h. 7m. A.M., and on the 15th at 0h. 12m. A.M.

OCTOBER.

(*Continued from page* 41.)

Saturn is in the constellation Aries till the 21st, and in Cetus on the 22nd. He is visible throughout the night; rises on the 3rd, at 6h. 21m. P.M., and on the 27th, at 4h. 44m. P.M., near the W. by north point of the horizon; and souths at an altitude of 48° on the 15th. His path among the stars is shewn in the diagram inserted above.

Uranus is in the constellation Aries throughout the month. He rises on the 15th, at 5h. 22m. P.M., and souths at 0h. 32m. A.M.

Neptune rises before sun-set; and sets on the 1st, at 3h. 12m. A.M., and on the 15th, at 2h. 15m. A.M.

DECEMBER.

(*Continued from page* 49.)

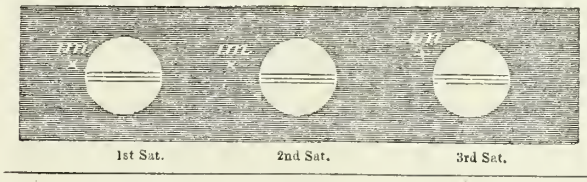
Uranus is in the constellation Aries throughout the month.

He sets on the 1st at 4h. 17m. A.M., and on the last day at 2h. 17m. A.M. He souths on the 1st at 9h. 16m. P.M., and on the 31st at 7h. 16m. P.M.

Neptune sets on the 1st at 11h. 8m. P.M., and on the 15th at 10h. 14m. P.M.

He is visible till early in the morning, and sets at 3h. 50m. A.M. on the 2nd, and at 1h. 52m. on the last day, near the W. by N. point of the horizon, and souths at an altitude of 46¾°. His motion among the stars is slowly westward; and he is near the Moon on the 4th and on the 31st.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION.



1st Sat. 2nd Sat. 3rd Sat.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Afternoon	Mars. Morning	Jupiter. Morning	Saturn. Afternoon	Neptune. Afternoon
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 29	0 17	5 46	11 30	11 14	7 54
6	11 41	0 22	5 34	11 14	10 53	7 34
11	11 52	0 28	5 22	10 59	10 32	7 14
16	Aftern.	0 35	5 9	10 43	10 11	6 55
21	0 17	0 42	4 56	10 28	9 50	6 35
26	0 31	0 49	4 41	10 12	9 29	6 15
30	0 42	0 55	4 29	10 0	9 12	6 0

JUPITER'S SATELLITES.

Are not visible, Jupiter being too near the Sun.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star. D. H. M.	At which limb of the Moon.	Between what Latitudes visible.
Psi 3 Aquarii	5	{ 3 10 13 P.M. / 3 11 27 P.M.	Dark / Bright	50° N. & 70° N.
B.A.C. 1468	6	{ 10 9 4 P.M. / 10 9 21 P.M.	Bright / Dark	TheEqu. to 71° N.
i Tauri	4½	{ 10 11 16 P.M. / 11 0 31 A.M.	Bright / Dark	8° N. & 85° N.

TIMES OF CHANGES OF THE MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Full Moon ..	8d.	11h.	21m.	P.M.
Last Quarter	16	9	22	A.M.
New Moon	23	2	6	A.M.
First Quarter	30	3	27	P.M.
Apogee ..	4	7		A.M.
Perigee ..	20	9		A.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination South.	Saturn. Right Ascension	Saturn. Declination North	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	14h. 10m	12° 18′	14h. 58m	16° 27′	8h. 26m	20° 48′	14h. 10m	12° 6′	1h. 56m	8° 59′	2h. 1m	11° 44′	22h. 35m	9° 54′
6	14 41	15 26	15 23	18 19	8 34	20 29	14 15	12 27	1 55	8 51	2 0	11 40	22 34	9 55
11	15 12	18 15	15 48	19 59	8 42	20 11	14 19	12 49	1 54	8 44	1 59	11 36	22 34	9 55
16	15 44	20 42	16 20	21 40	8 48	19 55	14 24	13 14	1 52	8 37	1 58	11 32	22 34	9 55
21	16 17	22 43	16 41	22 36	8 54	19 42	14 27	13 31	1 51	8 31	1 58	11 28	22 34	9 55
26	16 50	24 16	17 8	23 30	9 0	19 33	14 31	13 51	1 50	8 25	1 57	11 25	22 34	9 55

There is strange music in the stirring wind,
When lowers the autumnal eve, and all alone
To the dark wood's cold covert thou art gone,
Whose ancient trees on the rough slope reclined
Rock, and at times scatter their tresses sere.
If in such shades, beneath their murmuring,
Thou late hast pass'd the happier hours of Spring,
With sadness thou wilt mark the fading year.—W. L. Bowles.

November, with its fog and darkness, and Lord Mayor's Show, and the multitude who stand wheezing and sneezing while looking at it, has so little that is interesting in scenery which I have not before described, that I shall now endeavour to carry my readers into a past age—to the gloomy old forests whose vert and venison were guarded by grim and savage laws, which condemned a man to suffer death if he killed a deer within the forbidden forest boundaries. The stag was hunted in those days with kingly pomp and grandeur, through forests that darkened many a long league of land, and such as will never wave over green England again. Never more will there be such a mustering of verderers, regarders, agistors, woodwards, forest-keepers, and retainers of every degree, as then assembled amid the sound of horns, the baying of hounds, and the tramp and neighing of horses, mounted by monarch, and baron bold, and maiden fair, whose long locks streamed out on the morning breeze, or while she bent her neck to speak to some unmounted knight beside her, mingled their silkiness for a moment with the mane of her palfrey.

Sometimes the hunters rode through lonely glens, where all was silence, saving the brawling of the brook—where the echoes were never broken by human voice, except when the antlered monarch of the forest led the hunters into these solitudes. For weary miles a deep twilight ever reigned at noonday in this dreamy land of trees, where boughs, the growth of many a century, overhung the underwood, in which the hind concealed her young until they were strong enough to trot by her side over the velvet sward, under the waving woodbines, and the tall spotted fox-gloves, and the broad fan-like leaves of the brachen.

It is now the morning of the chase; and we will forget the present day of railroads and steamboats, and place ourselves amongst the spectators who five hundred years ago assembled to witness the departure of the hunters. For miles around the forest men are stationed at given distances to drive back the deer that may attempt to escape; others are holding huge stag-hounds in strong leashes—hounds gaunt and shaggy, yet swifter of foot than the fallow-deer, and possessing strength enough to pull down the proudest leader of the antlered herd. The horses keep arching their necks, and pawing the ground, and scattering the white foam on the bystanders, while they champ the bit restlessly, and jerk their heads impatiently, as if eager to be "sniffing the wind" afar off And now the train issues from the grey postern of the old castle, over which the drooping ivy waves like the green "garland of eternity." Lady's scarf and knightly plume bend in the breeze, as they ride out side by side—forgotten beauty and forgotten bravery, once seen where only the wild wall-flower now waves.

Hark! the horn sounds: the hounds which have lain among the heather spring up; others strain at the leash; the horses become more impatient; hunters follow the foremost hounds into the forest; there is heard a loud crashing of branches; then the horn is again heard. Those three piercing blasts proclaim that the deer is started, and now the whole cavalcade dash into the wide grassy opening that winds for miles into the forest, marked by the wheels of wains and the hoofs of bullocks that have dragged many a stout gigantic tree from the solitude in which it stood for centuries. Fresh from his forest covert bounds the noble stag, looking around a moment in wild amazement; then springing through the underwood, he trots at first leisurely along some well-known path; then the baying of the hounds reaches his ear, and through the entangling thicket he thunders, parting the branches as if they were but mist, while they close again behind him with a force strong enough to sweep a lady from her palfrey. By the forest-brook, which has so often reflected his branching head, he now hurries along: the baying of the hounds draws nearer; he has already run miles, his mouth is now dry, his tongue hangs out, his horns fall back on his neck, and his eyes seem only to look behind, as if measuring the distance between him and his pursuers, and so, panting heavily, he passes along, and at last dashes across the stream. He shakes his antlered head, pauses again for the twentieth part of a second; and, while the wet drops which he scatters around fall on the brown fern and the gorse, and the bramble black with berries, and the briar red with hips, and the wild-rose, away he goes again into a still denser thicket, making the branches rattle again as he cleaves them asunder. A minute after, and the foremost hounds come up: for a moment they are at fault—they have lost the scent—in another second the

slot is found; they dash through the stream, and the forest again rings with their deep-mouthed clamour. Far behind come the horsemen, through openings of the wood, the bells of their bridles jingling with a pleasant sound, the horses stopping almost noiselessly on the forest turf, as they hurry along in their headlong course. Where the shadow of the broad oak falls, onward plunges the deer; he passes like a phantom through the sunshine between the trees. Onward come the hounds in pursuit; then the close branches shut out the scene, and all you hear are the echoes and the faint tramp of the last of the cavalcade. Later in the day, and far beyond the forest, you again see the poor wearied stag, dragging his limbs heavily along, while only two or three of the stanchest hounds have been able to follow him, with one lonely hunter, whose jaded steed looks as if it would founder if urged on another step: the rest who followed have long ago drawn in their rein, and abandoned the chase. You look behind, and there see a noble hound panting on the ground, a rider standing beside his fallen horse; further on, a steed that has dropped down dead; nor have the hounds which have now reached the stag strength to pull him down, but, as they tug at his throat and haunches on the spot where he fell through sheer exhaustion, they are compelled to pause every moment to recover breath. See, the hunter alights, and with his knife ends the miseries of the poor stag.

The following beautiful song, descriptive of the chase, is from the pen of the late P. T. Fraser, the celebrated historian, and is one of the best modern compositions we have seen on the subject, excepting always that inimitable scene in the "Lady of the Lake:"—

Hark, through the greenwood ringing,
Peals the merry horn;
On gallant steed, o'er dewy mead,
Sir Acquetin is borne.
Many a brave and noble knight
Pranceth proud on left and right;
With beagle good they draw the wood
And loud and shrilly raise
The music of the chase.

Deep within the forest,
Fast by a fountain clear,
With dewdrop dank upon his flank,
Stands the noble deer.
See, he starts! for, heard afar,
Come the notes of woodland war;
And up he springs, and on the wings
That mock the mountain wind,
Leaves hound and horn behind.

Sweet, sweet upon the mountain
Sinks the setting sun;
The coursers fleet scarce drag their feet:
The weary chase is done.
But where's the antler'd king who late
Ranged his realms in fearless state?
Alas! alas! upon the grass,
That his best heart's-blood dyes,
The captured monarch lies.

The Earl of Athol, in 1563, had a grand hunting-match, at which the unfortunate Mary, Queen of Scots, was present. Two thousand Highlanders were employed in driving the deer from the hills of Athol, Badenoch, Muir, Moray, and the neighbouring counties, and nearly the whole of the Scottish nobility were present on the occasion. Upwards of two thousand deer were driven together. But we must let the author, William Barclay, who witnessed this "Royal hunt," as it was called, describe what he himself saw:—"The Queen, the great men, and a number of others, were in a glen, when all these deer were brought before them. Believe me, the whole body moved forward in something like battle order. This sight still strikes me, and ever will strike me, for they had a leader whom they followed close wherever he moved: this leader was a very fine stag, with a very high head. This sight delighted the Queen very much, but she soon had cause for fear, upon the Earl's (who had been from his early days accustomed to such sights) addressing her thus:—'Do you observe that stag who is foremost of the herd? There is danger from that stag; for, if either fear or rage should force him from the ridge of that hill, let everyone look to himself, for none of us will be out of the way of harm, for the rest will follow this one, and, having thrown us under foot, they will open a passage to this hill behind us.' What happened a moment after confirmed this opinion; for the Queen ordered one of the best dogs to be let loose on one of the deer: this dog pursues; the leading stag was frightened; he flies the same way he had come there; the rest rush after him, and break out where the thickest body of the Highlanders was. They had nothing for it but to throw themselves flat on the heath and allow the deer to pass over them. It was told the Queen that several of the Highlanders had been wounded, and that two or three had been killed outright, and the whole body (of deer) had got off, had not the Highlanders, by their skill in hunting, fallen upon a stratagem to cut off the rear from the main body. It was of those that had been separated that the Queen's dogs and those of the nobility made slaughter. There were killed that day three hundred and sixty deer, with five wolves and some roes."

Many, no doubt, imagine that wolves were extinct in Great Britain at a very early period, and are not, perhaps, aware that England was infested with this formidable animal in the reign of Edward I, and that this Monarch issued a proclamation ordering the destruction of wolves in the counties of Gloucester, Worcester, Hereford, Salop, and Stafford, and that great rewards were paid to those who destroyed these dreaded animals. The last wolf seen wild in Britain was killed about one hundred and seventy years ago, at Lochaber, in Scotland. A few centuries back, Yorkshire was so overrun with wolves, that places for shelter in case of attack were erected on the wolds and other wild and lonely parts of this extensive county; and parish-books yet exist, of a comparatively modern date, which show the sums paid to different individuals for destroying wolves. In those days they bred on the wolds and "caves," and found shelter in the vast forests which spread over England; and from these retreats the wolves issued forth at night, and devoured numbers of sheep.

Such, reader, was the England in which our forefathers lived, while as yet railroads, and steamboats, and electric telegraphs "lurked in the womb of Time." Then the slow pack-horse, and the heavy rumbling wain, often drawn by oxen, were the only modes of conveyance—the one with its packs and jingling bells, or wicker panniers, then called "dorsers" (and we have still in London the sign of the "Horse and Dorsers"); the other heavy and cumbrous, with wheels that moved on wooden axles: and when the miry and rutted roads are taken into consideration, our slow-paced carriers' carts are, comparatively speaking, four-horse coaches to the speed of travelling in those old primitive times. Then there were no lamps to light the streets on the dark November nights, but only an open cresset, not unlike a chafing-dish, stuck on a pole here and there, and which, being open, was soon blown out on a windy night. And, saving the drowsy voice of the feeble old bellman, heard at intervals as he went his rounds, and the occasional flicker of his horn-lantern on the unpaved streets, the old towns would lie asleep in dreary darkness and unbroken silence. When we glance at the past, then turn to the England of the present day, and think seriously of the changes which have taken place, even within the last half-century only, they are a thousand times more marvellous than the fabulous wonders wrought by the magicians in the story-books we perused in our boyish days.

My description of "Rural Sports" having infringed somewhat largely on the space I have generally dedicated to Natural History, I will, by way of change, endeavour to give some account of the habits of Newts and Lizards, a class of reptiles which are but little known, though so common in England. Water-newts are called by the country-people efts, and are generally supposed to be venomous—a most absurd notion, for a more inoffensive reptile does not live than the newt. He is an excellent and an elegant swimmer, and can steer himself in any direction he pleases to go by the aid of his rudder-like tail; he also turns back his legs to propel himself forward, as a swimmer does when he throws back the water, after having struck out with his hands. He can also walk as well under water as on land, nor is there anything ungainly in his motion. They lay their eggs in the leaf of some water-plant, which they afterwards fold together with their hinder feet, and fasten as securely as if it were glued; the young ones are able to swim the moment they quit the egg. Newts do not always confine themselves to water, but run and play upon the ground in moist damp places, and climb about the aquatic plants. Their principal food is water-insects and worms, though they are not all particular about devouring one another, especially the large water-newt, who is rather partial to making a meal off the smooth or common newt.

The common lizard is a beautiful little reptile, often most exquisitely marked with green, brown, white, and yellow spots; the white sometimes springing from the centre of large black spots which run the whole length of the back and sides. It is commonly found on banks which lie open to the sun, on the edges of heaths and commons, or by the sides of woods. The belly of the lizard bears no bad resemblance to chain armour, while the throat looks like the scales of a gorget of mail. So rapid is the turn of the head of the lizard when it seizes an insect, that it is almost impossible for the human eye to detect the motion, so suddenly is the prey seized and swallowed. Its speed along a footpath is so rapid, that, had it a bulk in proportion to its powers of flight, it would be able to run ten miles in less time than the swiftest race-horse that ever lived went over a mile of ground. Lizards have been rendered so tame as to eat out of the hand, though generally they attempt to bite the finger. The blood of the lizard, like that of all reptiles, is cold; nor does it show any sign of life, or require any nourishment during the long months of Winter, but remains in a state of torpor, immoveable as a stone, until the return of Spring.

I must not conclude my description of the present month, without directing the attention of my readers to the beautiful Engraving at the head of it, which is so faithful a picture of a dull, melancholy November day, that we almost feel "the low sky raining" while we look at it. We pity the passengers outside the coach, for we know that they are wet through, and feel thankful that they are so near the end of their miserable journey. How the water pours down the road that crosses the bridge, we not only see by the torrent in the ruts, but also by the reflection of the coach-wheels—a masterly touch, which only your true-born Artist would have thought of. To look over those gloomy arches into the river on such a day gives a man the horrors; there is a cold clamminess about the stones of the parapet, and a deep smoky fog upon the water, which you seem to feel while leaning over and looking at it, as if it were slowly searching through your garments, while an hundred old colds and coughs were trying to penetrate you, and flu within a shelter.

Humid evening, gliding o'er the sky,
In her chill progress, to the ground condensed
The vapour throws. Where creeping waters ooze,
Where marshes stagnate, and where rivers wind,
Cluster the rolling fogs, and swim along
The dusky-mantled lawn. THOMSON'S *Seasons*.

DECEMBER.

LEOPOLD GEORGE FREDERICK, KING OF BELGIUM, BORN DECEMBER 10, 1790; ASCENDED THE THRONE JULY 21, 1833.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'clock.	SUN. Souths. Height above horizon.	SUN. Sets.	MOON. Rises. Afternoon	MOON. Souths. Afternoon	MOON. Souths. Height above horizon.	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunset. O'Clock. 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 6h. 8h. 10h.	HIGH WATER AT LONDON BRIDGE. Morning.	HIGH WATER AT LONDON BRIDGE. Afternoon	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	M	Fomalhaut souths 6h 9m P.M.	7 46	10 52	16¾	3 52	1 33	6 56	30	Morning.		8		7 45	8 20	335
2	Tu	Bonapte. cr. 1804	7 47	10 29	16¾	3 52	1 51	7 37	34¾	0 30		9		8 55	9 30	336
3	W	Length of day 8h 3m	7 48	10 6	16½	3 51	2 9	8 19	39¼	1 34		10		10 5	10 40	337
4	Th	Alpha Arietis souths 9h 6m P.M.	7 49	9 42	16¼	3 51	2 28	9 1	44	2 41		11		11 10	11 40	338
5	F	Day breaks 5h 47m	7 51	9 18	16¼	3 51	2 46	9 44	48¾	3 47		12		No Tide.	0 5	339
6	S	*Nicholas*	7 52	8 53	16	3 51	3 9	10 31	52¾	4 55		13		0 25	0 45	340
7	S	2D S. in ADVENT	7 53	8 27	16	3 50	3 36	11 20	56¼	6 6		14		1 2	1 20	341
8	M	Conception of the Blessed Virgin Mary	7 55	8 1	15¾	3 50	4 8	Morning.	58¼	7 16		●		1 40	2 0	342
9	Tu	Milton b., 1608	7 56	7 35	15¾	3 50	4 52	0 12		8 24		16		2 20	2 35	343
10	W	Length of night 16h 8m.	7 57	7 8	15½	3 49	5 42	1 7	60¼	9 26		17		2 55	3 15	444
11	Th	Grouse sh. ends	7 58	6 40	15½	3 49	6 47	2 4	60¼	10 32		18		3 30	3 50	345
12	F	Aldebaran souths 11h 3m P.M.	7 59	6 12	15¼	3 49	7 59	3 1	59	11 7		19		4 10	4 35	346
13	S	*Lucy*	8 0	5 44	15¼	3 49	9 15	3 57	56¼	11 43		20		4 55	5 15	347
14	S	3D S. in ADVENT	8 0	5 16	15¼	3 49	10 36	4 51	52¼	Afternoon		21		5 40	6 10	348
15	M	[*O Sapientia*	8 1	4 47	15¼	3 49	11 54	5 44	47½	0 38		(		6 35	7 5	349
16	Tu	Cam. Term ends	8 2	4 18	15¼	3 49	Morning.	6 34	42¼	1 0		23		7 35	8 10	350
17	W	*Ember Week.* Ox.	8 3	3 48	15¼	3 49	1 14	7 25	36¾	1 23		24		8 50	9 25	351
18	Th	[Term ends	8 4	3 19	15	3 50	2 33	8 15	31	1 44		25		10 0	10 35	352
19	F	Length of day 7h 45m	8 5	2 49	15	3 50	3 53	9 7	26	2 9		26		11 10	11 40	353
20	S	[*St. Thomas*	8 5	2 19	15	3 51	5 14	10 0	21½	2 37		27		No Tide.	0 10	354
21	S	4TH S. in ADVENT	8 6	1 49	15	3 51	6 32	10 55	18¼	3 11		28		0 35	1 0	355
22	M	Shortest d. this yr	8 6	1 19	15	3 51	7 42	11 50	16	3 54		○		1 25	1 50	356
23	Tu	Length of day 7h 45m	8 6	0 49	15	3 51	8 45	Afternoon	14¼	4 47		1		2 10	2 35	357
24	W	Christmas Eve	8 7	0 19	15	3 52	9 37	1 41	16	5 49		2		2 55	3 20	358
25	Th	CHRISTMAS DAY	8 7	After 12 o'clock	15	3 53	10 16	2 32	17	6 54		3		3 40	4 0	359
26	F	*St. Stephen*	8 7	0 41	15¼	3 53	10 49	3 21	20¼	8 0		4		4 20	4 40	360
27	S	*St. John*	8 8	1 11	15¼	3 54	11 15	4 7	24	9 7		5		4 55	5 15	361
28	S	1ST S. aft. CHRIST	8 8	1 41	15¼	3 55	11 38	4 51	28¼	10 14		6		5 35	5 55	362
29	M	[*Innocents*	8 9	2 10	15¼	3 56	11 57	5 33	32¼	11 21		7		6 15	6 40	363
30	Tu	Rigel souths 10h 32m P.M.	8 9	2 39	15¼	3 57	Afternoon	6 14	37¼	Morning.		☽		7 0	7 25	364
31	W	*St. Silvester*	8 9	3 8	15⅓	3 58	0 33	6 55	42	0 25		9		7 50	8 20	365

DECEMBER.

The Sun is situated south of the Equator, and on the 22nd day attains his extreme south position. From the 23rd he is moving northward. He passes from the sign Sagittarius to Capricornus, completing the tropical year, on the 22nd day, at 8h. 42m. P.M., having been in the former sign 29 days, 12 hours, and 47 minutes. On the 1st day he is 93,636,000 miles from the Earth; and this distance decreases to 93,406,000 miles by the 31st, and is the least distance during the year. He rises at the beginning at 2°, and about the 20th at 5°, S. of the S.E. by E.

The Moon is in the constellation Pisces on the 1st; on the 4th she enters Cetus; on the 5th Aries; on the 6th Taurus; on the 9th Orion and Gemini; on the 11th Cancer; on the 12th Leo; on the 15th Virgo; on the 18th Libra; on the 20th Scorpio and Ophiuchus; on the 22nd Sagittarius; on the 24th Capricornus; on the 26th Aquarius; on the 28th Pisces; and on the 31st into Cetus.

She is above the horizon when the Sun is below, during the morning hours, from the 5th to the 25th; the evening hours, from the 1st to the 18th, and after the 25th.

She is on the Equator on the 3rd; is at her extreme north declination on the 10th; is on the Equator again on the 17th; at her extreme south declination on the 23rd; and on the Equator on the 30th.

She is near Saturn and Uranus on the 4th; Mars on the 12th; Jupiter on the 19th; Mercury and Venus on the 24th; Saturn and Uranus on the 31st.

Mercury is in the constellation Ophiuchus till the 5th; and in Sagittarius from the 6th.

He rises and sets after the Sun throughout the month; he is therefore an evening star: he sets, on the 1st, at 4h. 23m. P.M., being 32m. after the Sun; on the 11th, at 4h. 48m., being 59 minutes after the Sun; at 4h. 57m. on the 14th; at 5h. 6m. on the 17th, being 1h 17m. after the Sun; at 5h. 21m. on the 23rd, being 1¼ hour after the Sun; and at 5h. 7m. on the last day, being 1h. 9m. after the Sun. He is therefore favourably situated for observation from the 11th to the end of the month, and may be seen by the naked eye some little time after sunset. He sets till the 20th midway between the S.W. by W. and the S.W., and on the 29th at the S.W. by N. point of the horizon. He is moving eastward among the stars till the 26th; is stationary on the 23th; and begins to move eastward on the 30th; is near Venus on the 13th and 20th, and the Moon on the 24th; and is at his greatest eastern elongation on the 20th. His path among the stars during this month is shewn in the diagram inserted in last month; and by reference to his position on December 12 with that of Venus on the same day, as shewn in the above diagram, it will be seen that the relative position of both planets to Mu Sagittarii is almost the same, and therefore those two planets are nearly together on this day, and they continue moving almost together till the 20th day.

Venus is in the constellation Ophiuchus till the 4th; and in Sagittarius from the 5th to the 27th; and in Capricornus from the 28th to the end of the month.

She is an evening star; and sets, on the 1st, at 4h. 45m.; and on the last day, at 5h. 48m., nearly midway between S.W. by W. and S.W. at the beginning, and at the S.W. by W. at the end of the month. She is moving eastward among the stars, and is near the Moon on the 24th. She is in Aphelion on the 16th.

Her path among the stars till the 20th is shown in the annexed diagram. On December 12 she is near Mercury, and continues near till the 20th.

Mars is in the constellation Cancer throughout the month. He is visible during the night, and rises on the 2nd at 8h. 29m. P.M.; and on the 31st at 6h. 24m. P.M., near the N.E. by N. point of the horizon. He is almost stationary among the stars during this month, and is near the Moon on the 12th. He souths at an altitude of 58¾° at about the middle of the month. For his path among the stars, see the diagram inserted in the month of September.

Jupiter is in the constellation Libra throughout the month.

He is a morning star; and rises on the 1st at 5h. 4m. A.M., and on the last day at 3h. 38m. A.M., near the E.S.E. point of the horizon. He moves slowly eastward among the stars, and is near the moon on the 19th. For his path among the stars, see the diagram inserted in the month of June.

Jupiter's Satellites.—A few eclipses are visible. The relative position of the Satellite to Jupiter at the time of its eclipse, as viewed through an inverting telescope, is shewn in the next diagram.

PATH OF VENUS FROM AUGUST 20 TO DECEMBER 20, 1851.

Scale, 24 degrees to one inch.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION OR EMERSION.

1st Sat. 2nd Sat. 3rd Sat.

Saturn is in the constellation Cetus throughout the month.

(*Continued on page* 45.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Afternoon	Venus. Afternoon	Mars. Morning.	Jupiter. Morning.	Saturn. Afternoon	Neptune Afternoon
	H. M	H. M.	H. M.	H. M	H. M.	H. M.
1	0 44	0 56	4 26	9 57	9 8	5 55
6	0 58	1 4	4 9	9 41	8 48	5 36
11	1 11	1 12	3 52	9 25	8 27	5 16
16	1 21	1 20	3 33	9 9	8 7	4 57
21	1 26	1 27	3 13	8 54	7 47	4 38
26	1 20	1 34	2 51	8 37	7 27	4 18
31	0 56	1 41	2 28	8 21	7 7	3 59

JUPITER'S SATELLITES.

Eclipses of

1st Sat. Immersion.	3rd Sat. Immersion.
D. H. M.	D. H. M.
12 5 48 A.M	7 6 47 A.M.
19 7 42 A.M.	
28 4 4 A.M.	

2nd Sat.

18 6 30 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitudes	Times of disappearance & re-appearance of the Star.	At which limb of the Moon.	Between what Latitudes visible.
		D. H. M.		
B.A.C. 845	4	5 6 27 P.M.	Dark	15° N. &
		5 7 38 P.M.	Bright	90° N.
Delta 2 Tauri	4½	7 6 2 P.M.	Bright	2° S. &
		7 6 53 P.M.	Bright	72° N.
63 Geminorum	6	11 0 30 A.M.	Bright	14° N. &
		11 1 43 A.M.	Dark	80° N.
83 Cancri	6	12 9 42 P.M.	Bright	2° S. &
		12 10 34 P.M.	Dark	69° N.
37 Leonis	6	13 10 24 P.M.	Bright	7° N. &
		13 11 13 P.M.	Dark	90° N.

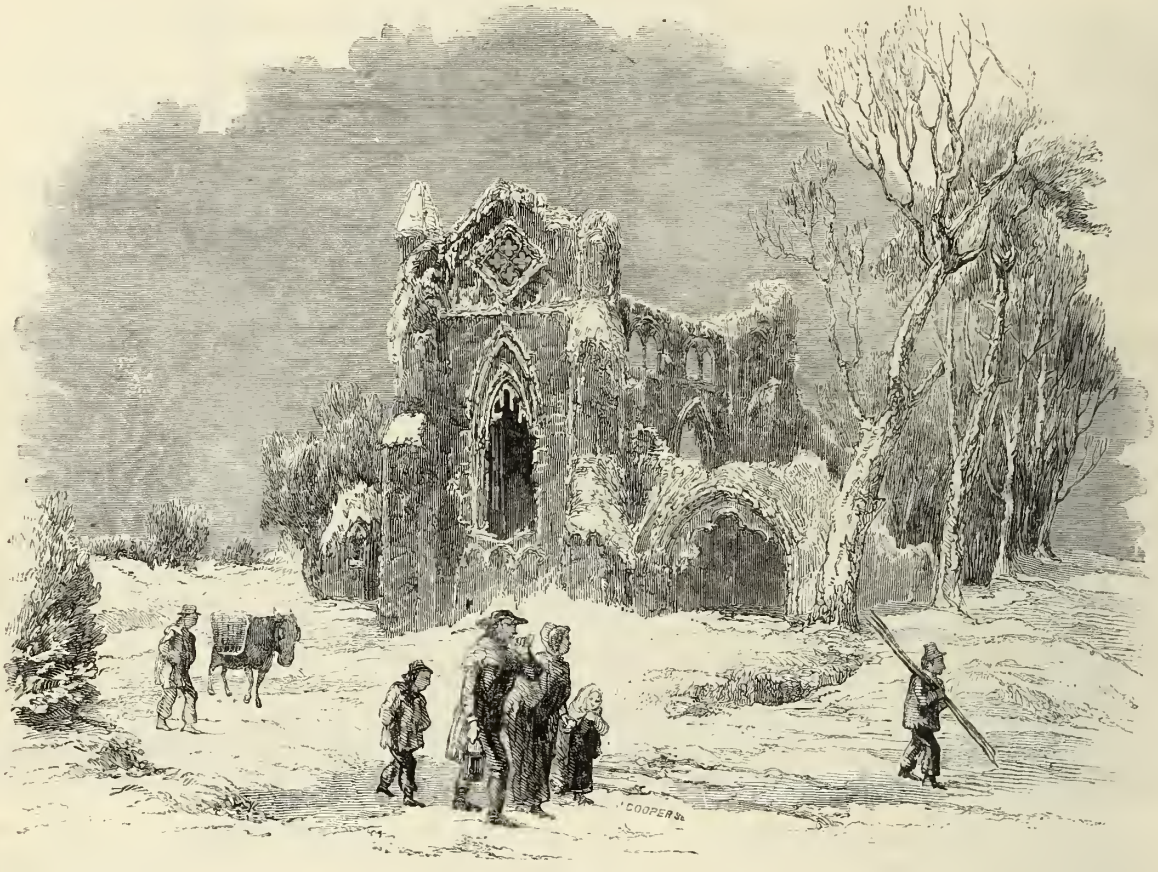
TIMES OF CHANGES OF THE MOON,
And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation

Full Moon ..	8d.	3h.	27m	P.M.
Last Quarter	15	5	26	P.M.
New Moon ..	22	3	34	P.M.
First Quarter	30	1	15	P.M.
Apogee	2	2		A.M.
Perigee ..	16	9		P.M.
Apogee	29	11		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	Mercury. Right Ascension	Mercury. Declination South.	Venus. Right Ascension	Venus. Declination South.	Mars. Right Ascension	Mars. Declination North.	Jupiter. Right Ascension	Jupiter. Declination South.	Saturn. Right Ascension	Saturn. Declination North.	Uranus. Right Ascension	Uranus. Declination North.	Neptune. Right Ascension	Neptune. Declination South.
1	17h. 23m	25° 17′	17h. 35m	24° 6′	9h. 4m	19° 27′	14h 35m	14° 10′	1h. 49m	8° 20′	1h. 56m	11° 22′	22h. 34m	9° 54′
6	17 57	25 44	18 3	24 24	9 7	19 27	14 39	14 29	1 48	8 17	1 56	11 19	22 35	9 53
11	18 29	25 35	18 30	24 24	9 9	19 32	14 43	14 47	1 47	8 14	1 55	11 17	22 35	9 51
16	18 59	24 50	18 58	24 4	9 9	19 45	14 47	15 4	1 46	8 12	1 55	11 14	22 35	9 50
21	19 24	23 33	19 25	23 26	9 9	19 59	14 51	15 20	1 46	8 11	1 55	11 13	22 36	9 48
26	19 37	22 0	19 52	22 30	9 7	20 22	14 55	15 36	1 46	8 11	1 54	11 11	22 36	9 46

DECEMBER.



Oh, Winter ! ruler of th' inverted year,
Thy scatter'd hair with sleet-like ashes fill'd,
Thy breath congealed upon thy lips, thy cheeks
Fringed with a beard made white with other snows
Than those of age ; thy forehead wrapt in clouds ;
A leafless branch thy sceptre; and thy throne
A sliding car indebted to no wheels,
But urged by storms along its slippery way.—COWPER.

DECEMBER brings the shortest day; the lessening daylight has now reached "the utmost limit of its narrow sail;" the longest night has had its reign; for that mighty Power which gave to the ever-moving ocean its boundaries, said also to Darkness, "Hitherto shalt thou come, but no further." What solemn poetry our Artist has thrown around the picture of Winter which heads the present month, by throwing the ruins which Time has made into his wild waste of December snow, a roofless and venerable pile that no longer affords shelter, but makes the loneliness of the landscape, at such a season, appear more lonely. We look upon it, and exclaim—

Pause here awhile ! and on these ruins look,
Worn with the footsteps of forgotten years;
Peruse this page in Time's black-letter'd book;
Gaze long, and read how he his trophies rears !
See how each shatter'd shrine and sculptured nook
The dinted impress of his footmark bears.
Who was it rear'd this crumbling pile of stone ?
Ask Time ! he only knows who now reigns here alone.

Gaze on that window now ! 'tis shorn of all
Its saintly forms, and gaudy colourings;
The sky-dyed tunic, and the purple pall,
The glowing gold that form'd the vests of kings,
No longer flash at sunset on the wall;
Gone are the chequer'd angel's rainbow'd wings.
The Winter wind alone blows bleakly there,
And on the graven stones masses of snow appear.

Snow in the streets of a city cannot be endured; it has scarcely fallen before it wears an old, grey, dirty look on the pavement; it is mingled with the mire trod by ten thousand footsteps; it is swept into the middle of the road by the shopkeeper, then wheels roll over it, and it is trampled beneath the hoofs of horses, and you can scarcely bear to look out of the window at the "slushy" and filthy streets until the dirty mass is swept up and carted away. In the country it lies like a "wintry veil" upon the face of the landscape; the banks appear in the distance like barriers of white marble; the hills, like ranges of silver clouds: and when the sun shines you can scarcely discern the rim of the horizon, so beautifully are the snowy summits of the hills and the fleecy edges of the clouds blended together—harmonising, like the lips of a sleeping maiden with the rose-leaf which blew from the bush and settled upon them while she slumbered.

Winter nips the fingers of the woodman until he can scarcely bend them round the handle of his axe, so stiff and benumbed do the joints become. During the keen frost the ditcher tries in vain to force his spade into the ground, for the earth rings like iron, and gives back a "strange alien sound" at every stroke In one night the gardener sees his winter-greens shrivelled up as if they had been scorched by fire, his "potatoe pie" is frozen, and icicles hang beneath the glasses that shelter his tenderest plants. Spring is asleep deep down beneath the cold.

But of all the scenes which I have so often described as belonging to this season of the year, the wildest I ever witnessed was the breaking of the ice after a long frost in a large navigable river, a word-picture I have painted as follows in my "Winter:"—"First there came a gentle thaw; then the tide or heygre began its silent work beneath the ice, gradually lifting it higher, hour after hour, as the body of water arose underneath, unperceived save by the lond cracking it occasionally made. In the still night you heard that crackling sound run across the river, and often during the day after the tide had subsided; and sometimes where the long fissure ran along, the edge of the ice was slightly raised, so much so as to impede the progress of the skater: then sounds were heard like sudden gun-shots in rapid succession; water here and there welled through the crevices of the ice; though the large green black mass, save for these outlets and slight elevations, for miles away lay hard, thick, and unbroken. Men stood together conversing in low voices; in little groups by the river-side, sailors devising the best measures to save their ships when the ice broke up and the great crash came; wharfingers examining the piers which supported their wharves, and wondering whether or not they would stand the tremendous shock

which they would soon have to contend against: captains and owners arguing whether it would be better to let their vessels drift a little way with the mass, or moor them firmly and trust to the strength of their stoutest hawser. Some contended that there would be time enough left to decide on such matters when the ice began to move, others that there was not a single hour to lose. The reckless said that it would be two or three days before the ice broke up; the timid, that it would be on the morrow; the cautious, that the ships ought not to be left without a watch for a moment. Some said that the ice had lain so long, it was rotten and would be torn up and swept away by the next tide; others argued that, as it was so thick, it would be the work of many tides to split it asunder: a few experienced old seamen said that if the night-tide ran up strong, the whole mass would be shivered before morning. A gloom seemed to hang over the little town, and many, from motives of curiosity, and a love to see the wild work of Winter, went not to bed that night. I remained up amongst the number.

"Midnight came, and with it the tide. The moon threw a dim woolly kind of light over the river. We listened, and heard the ice breaking up miles away, as the wind and tide came growling and roaring along. Nearer and nearer drew the sound, like approaching thunder. The sailors who had gone to sleep on shore were now aroused to hurry aboard and take charge of their vessels. Between each thunder-like crash of the ice, we heard the cry of human voices from the men on board the ships, which were already tossing as if an earthquake heaved beneath them. Further down the river, signal-lights were hoisted amid the rigging—torches blazed and moved along the shore. Several of the sailors had not yet reached their ships, when one long, loud, continuous crash was heard, which told that the tide had already reached the town-side, and was now shivering up the river like glass. That sound was not like thunder—unlike the quick firing of cannon—but as if the earth had split asunder, and went on opening and shutting amid the fall of thousands of buildings, and the hissing, and surging, and boiling of the troubled waters, which it swallowed up with the ruins, while the rending thunder rived along its desolating course. So did the sheets of ice crash and grind together as they were tossed upon and over-rode each other; so were the ships torn from their moorings, and borne along by the overwhelming tide and the masses of ice which broke by and impelled them onward: water, and ice, and shipping whirled away to where the massy stone bridge threw the shadow of its arches over the wild turmoil, and there the mass was locked together—ships, boats, sheets of thick ice too big to pass through the dark arches, while the foundations of the bridge shook beneath the deafening roar."

Although woodcock and snipe-shooting commenced above a month ago, it still affords amusement to the sportsman, and will do throughout the whole Winter. Woodcocks generally come over in the night, and on their arrival are very lean; this, no doubt, is caused through their not having alighted anywhere to feed while on their journey. As we have stated in a former work, they bring no luggage with them when they return from their long sea voyage, but put up at the first road-side inn they reach, and which is generally a hedge, or ditch, or some waste, covered with furze; and without awakening either boots, ostler, chambermaid, or innkeeper, they take up their quarters for the night. Sometimes they remain a day or two before proceeding further into the country, for they have neither had steam, nor sail, nor plank to assist them in crossing the stormy ocean; nothing but their poor little wings to beat up against the wind, and dash aside the sea-spray—that is, if it ever roached so high an altitude as that through which they flew: and they have encountered all these perils, and come all that distance only to enjoy a banquet of worms.

They leave the woods in the evening to feed, and at such times may be heard making a shrilly noise, which resembles the sound made by the snips. Aided by their keen sight, delicate touch, and probably fine scent, they are enabled to find their food in the dark, and to pick up the smallest worm in such black benighted places, that we should need the light of a strong "bull's-eye lantern" to be able to see it at all. "The woodcock," says Colonel Montagne, in his "Ornithological Dictionary," "is naturally a shy and retiring bird, rarely taking wing by day, unless disturbed; but just at the close of day all, as if by common consent, quit the wood nearly at the same instant, and wander over the meadows in search of splashy places and moist ditches for food, retiring to their hiding-places again at the dawn of morning. Thus, when most other land-birds are recruiting exhausted nature by sleep, these are rambling through the dark, directed by an exquisite sense of smelling (?) to those places most likely to produce their natural sustenance; and, by a still more exquisite sense of feeling in their long bill, collecting it. Their eye is not called into use; and, like the mole, they may be said to feed beneath the surface; and, by the sensiblity of the instrument which is thrust into the soft earth, not a worm can escape that is within reach. The eyes of the woodcock are large in proportion to their general bulk of body, and, like those of some other nocturnal birds, are particularly formed for collecting the faint rays of light in the darkened vales and sequestered woodlands during their nocturnal excursions; thus, also, they are enabled to avoid trees and other obstacles which continually occur."

According as the weather changes, so will the woodcock shift his quarters, sometimes to the opposite side of the wood; or, if a sheltering hill intervene, he will cross it, and in some warmer solitude wait until the wind changes, then return to his old feeding-ground. He does not like cold, neither will he expose himself to it, if there is shelter to be found in the neighbourhood. We have heard a gentleman boast that he could always tell where a woodcock could be found by the marks of the dead leaves, in searching for worms beneath them; he says, the bird throws the leaves aside with its bill, alternately right and left but never two leaves together on the same side. He is a close observer, and the above fact may be relied upon. There is an outcry that woodcocks are becoming scarcer every season, and this, we think, can be accounted for by the extensive march of cultivation, and the great network of railways, which intersect England in every way, cleaving through woods, cutting between hills, and running over heaths and waste lands, and breaking up the silence where the birds formerly sheltered. We know nothing so likely to scare birds from their haunts as the thunder of a railway train, and the shrill screaming of the whistle.

As the woodcock is so seldom on the wing in the daytime, the sportsman is compelled to hunt for him, in his own shadowy and solitary haunts. Even when found in the thickets of a wood, and flushed, unless there is some opening near at hand, it is difficult to hit him. When flushed, the woodcock generally flies straight ahead, and goes blundering between the close and twisted branches, as if he did not care a straw what he ran against, so long as he escaped. Some sportsmen argue that this is the best time to aim at him, and that he is easier to hit than when he rises perpendicularly, and goes twisting and turning above the trees, when to aim at him would be like trying to hit a shooting star. Blaine (we think jocularly) recommends novices to go over to Ireland for a few weeks, and to try woodcock-shooting in the alder hedgerows, before they venture at it here, if they are anyways flurried. In an extensive wood it is necessary to have both beaters and markers: these, it appears, one gentleman kept clothed in leather suits from head to heel—the material so thick that the shot he used could not pass through it; so that, if he hit his man instead of his bird, he did him no harm. Cocking spaniels, when well broken, are generally considered the best dogs for woodcock-shooting.

He who is afraid of getting wet, or has a dread of cold hands and feet, must never hope to become a thorough good snipe-shooter; for the familiar haunts of this bird are the reedy and sluicy marsh, and the low, damp, meadow lands, fringed with pollard-willows, where a man of a delicate constitution is more likely to catch the ague than anything else. Onward the downright sportsman must plunge, if he hopes to start his birds, up to the knees in mud or mire; and he may thank his stars if at the next step he is not up to his neck, imitating the boom of the bittern as he sputters back the oozy mixture with his lips. Neither must he wait for a fine calm day; but when it blows "great guns," sally out, for then the snipe lie well, and the best sport is to be found. A snipe, when it first rises, is more difficult to hit than a woodcock—giving so many twists and turns, that for the life of you you cannot tell what direction it will take for a second or two, except that it is sure to fly against the wind. The best plan is to wait a bit, until he has made up his mind what course to steer, and has become a little steady in his movements: that is the time to take a steady aim at him. A cross shot is preferable, when it can be had. The author of the "Oakleigh Code" says: "The shooter will bring down a snipe with much less difficulty at from fifteen to twenty paces than at any other distance. The aim is thus taken just before the bird begins to make its cross-flight, but before it has attained its full speed. The irregularity of its flight is of little consequence during the first and second twisting, before the bird is safely on the wing, since its flight is then comparatively tardy. But let the snipe fly ten yards from whence it sprung—let it be, for instance, twenty-five paces distant from the gun; it is then at the top of its speed, and in the very midst of its sidelong, elliptical gyrations, and more than a match for the majority of shooters."

In snipe-shooting the ground ought to be gone over twice or thrice during the day, so apt is the bird to return to the spot from whence he first started. We knew an old sportsman in Lincolnshire, who always went over the same ground at least twice in the same day, and few shot more birds than he did. When he chose his own day, he often brought home ten or twelve brace. He never went out without his favourite retriever (the only dog he took), to save himself from getting a wet jacket, as the birds, when shot, often fell into the deep and wide water-courses with which these extensive marshes abound.

Reader! we have again, for the third time, journeyed with thee through the twelve months of the year, and now turn to bid thee farewell on the threshhold, ere we enter and close the door. This year we have carried thee over new ground, and made thee acquainted with many of our English Sports. We have shown thee how the poor hare is coursed in January, and what shifts she has recourse to, to escape from her pursuers. In February, we have borne thee company to the wild meres and marshes of England, where the bullrush reds, and the bittern booms, and the wild-fowl shooter lies in wait for his prey. In March, April, and May, we have shown thee how rabbits are shot, fish caught with the fly, and young rooks brought down, before they are buried snugly under tempting crusts, and made into savoury pies. In June, we have opened the doors of the past, and shown thee the sports of another age, before the murderous gun was heard, and when bird was taught to prey on bird, and crowned Kings eagerly pursued the noble sport of Hawking. Racing, Cricketing, Shooting, and Fox-hunting fill up a large portion of the following months, and we have pictured them all as they exist in the present day. In November, we have again looked backward at the past, and endeavoured to bring before thine eye one of those noble stag-hunts which, in former years, so often awoke the echoes of our old English forests. By these changes we have brought forward something new for every month, not only from our own knowledge, but enriching our descriptions with occasional extracts from authors better acquainted with the subjects than ourselves, and to whom we hope we have, in every instance, given "honour due" and faithful acknowledgment. And now, with many thanks for the hours thou hast borne us company, we once more, Reader, bid thee farewell.

THOMAS MILLER.

DESCRIPTION OF THE DIAGRAM OF MEAN TEMPERATURE OF THE AIR.

THE numbers in the boundary columns on either side show the mean reading of the thermometer, and those on the top and bottom indicate the year.

The mean temperature of each period, as found from all the observations, is shown by a dotted line; and the mean temperature of any particular period is shown by a continuous line, the spaces between which and the dotted line, during any period whose temperature has been below its average value, are all below the dotted line, and are represented by dark spaces, and those periods whose temperatures have been above the average are all above the dotted line, and are represented by light spaces.

The distribution of heat, over any year and over any group of years, is thus immediately exhibited to the eye, and it will readily be seen that there is a gradual transition from the preponderance of the light to an almost mean state, and then to a preponderance of the dark; or, in other words, that cold years come together, and hot years come together. This circumstance is shown in several instances, and will be spoken of presently.

The diagram shows in an admirable manner the leading particulars of each quarterly period and of the whole time; and it will be seen that the preponderance of dark is on the left side of the diagram, and the excess of light on the right side, thus indicating that the climate has become warmer.

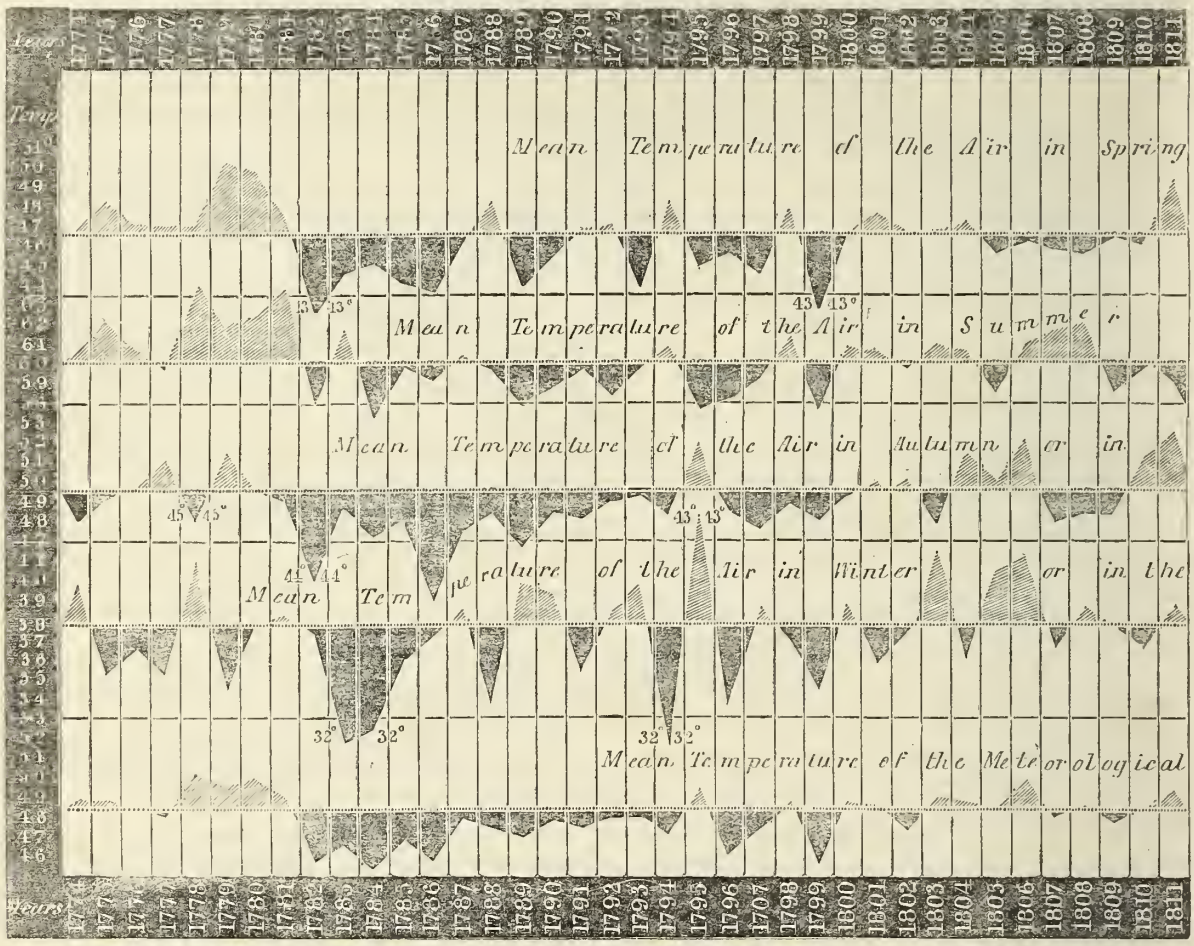
The number of observations used in the formation of this diagram exceeds 200,000: they were made till the year 1840 at the apartments of the Royal Society, and were printed in each volume of the *Philosophical Transactions*. Those since 1840 were made at the Royal Observatory, Greenwich. All these observations have just been reduced and made available by Mr. Glaisher, in a paper published in the *Philosophical Transactions*, part 2, 1850, in which he has explained the methods adopted by him to reduce this long series of observations to one and the same series. In this paper will be found the numerical values of the monthly, quarterly, and yearly mean temperatures, from the beginning of the year 1771 to the end of that of 1849. By reference to the diagram and to these tables, we can collect the following particulars:—

The mean temperature of spring, from all the observations, was 46°4. The years distinguished by cold springs were 1771, 1772, 1782, 1785, 1786, 1789, 1793, 1799, 1814, 1816, 1837, 1839, and 1845; and the mean of their temperatures was 43°2.

The coldest spring, during the whole period, was in the year 1837, and its mean temperature was 40°9.

The years distinguished by hot springs were 1799, 1780, 1811, 1822, 1830, 1841,

DIAGRAMS SHEWING THE MEAN TEMPERATURE OF SPRING, SUMMER, AUTUMN, WINTER, AND



The dark spaces denote that the Temperature was below the average, and the light spaces denote that the Temperature was above the average.—The distance from the dotted lines denotes the departure from the mean of the period.

and 1848; and the mean of their temperatures was 49°7. The hottest spring, during the whole period, was 1779, and its mean temperature was 50°8.

The mean temperature of summers, from all the observations, is 60°0. The years distinguished by cold summers were 1771, 1795, 1799, 1812, 1813, 1814, 1816, 1817; and the mean of their temperatures was 57°9.

The years distinguished by hot summers were 1778, 1779, 1780, 1781, 1808, 1818, 1826, 1834, 1835, 1842, and 1846; and the mean of their temperatures was 63°2. The hottest summer within the period was that in the year 1846, and its mean temperature was 63°4. The coldest summer within the period was that in the year 1816, and its mean temperature was 52°2.

The mean temperature of autumn, from all the observations, is 49°3. The years distinguished by cold autumns were 1771, 1782, 1786, 1789, and 1829; and the mean of their temperatures was 45°9.

The years distinguished by hot autumns were 1779, 1795, 1804, 1806, 1811, 1818, 1821, 1822, 1831, and 1846; and the mean of their temperatures was 52°3. The coldest autumn within the period was that in the year 1786, and its mean temperature was 44°2. The hottest autumn within the period was that in the year 1718, and its mean temperature was 54°2.

The mean temperature of winter, from all the observations, is 37°6. The years distinguished by cold winters were 1779, 1783, 1784, 1788, 1794, 1796, 1798, 1799, 1813, 1829, 1837, and 1840; and the mean of their temperatures was 33°5.

The years distinguished by warm winters were 1778, 1795, 1803, 1806, 1821, 1827, 1833, 1845, and 1848; and the mean of their temperatures was 42°1.

The coldest winter within the period was that in the year 1794, and its mean temperature was 31°6.

The warmest winter within the period was that in the year 1795, and its mean value was 43°2. The winters of the years 1833 and 1845 were remarkably warm, being both of the value of 43°1.

As before observed, neither the diagram nor the tables at all confirm the idea that a hot summer is either preceded or followed by a cold winter, or *vice versâ*: on the contrary, it would seem that any hot or cold period has been mostly accompanied by weather of the same character. The cold year of 1771 was followed by two cold years. The hot year of 1779 was preceded by one warm year and followed by two others. In 1780 the extreme cold of January was more than counterbalanced by the extreme heat of March. The cold year of 1782 was followed by a long series of cold years. The very cold year of 1799 was followed by a very cold autumn and winter. The warm year of 1806 was preceded by a warm winter. The very cold year 1814 (the last very cold year we have had) was preceded by a moderate, and was followed by a warm winter. The hot year of 1822 was preceded by a warm, and was followed by a moderately cold winter. The hot year of 1834 followed a very mild winter, and was followed by another. The hot year 1846 was preceded by a warm winter, and was followed by a moderate one. The warm year 1848 was both preceded and followed by warm periods.

The mean temperatures of the years 1771, 1782, 1784, 1786, 1799, and 1814 were all below 46°; the coldest was 1784, and its value was 45°1.

The mean temperatures of the years 1779, 1818, 1822, 1834, and 1846 were all above 50°; the year of highest temperature was 1846, and its value was 51°3. The mean from all the years from 1771 to 1849 gives a mean temperature of 48°3, with a variation, between one year and another, from 45°1 in 1784, to 51°3 in 1846; the difference is 6°2.

The following is the character of each year as determined without instrumental means:—

1771.—There were frequent and very sharp frosts till April 20. On February 12 the reading of the thermometer was as low as 4°. The month of May was warm. The summer was cool and dry. October was a wet and windy month; and the weather was mild to the end of the year. The severe weather of the beginning of the year caused a bad seed-time, and the harvest was very late.

1772.—The beginning of January was mild; from the middle of January frosts and great snows were frequent, and continued to the middle of March. The summer was very fine. The autumn was mild, but wet; and there was no frost till December 22.

1773.—With the exception of the latter part of February, which was stormy and wet, there was much fine weather till the beginning of May; then many mornings were frosty; after which heavy rain fell frequently till June. The summer was fine. The autumn was wet; and there was no frost till December 22.

1774.—The year began with severe frost, and for nearly two months the ground was frost-bound. Occasionally there were great rains or snow. The weather was more moderate in April. The summer was cool, with heavy rains. The autumnal months were wet, particularly in September. Some snow fell in November and beginning of December. This year was remarkably wet.

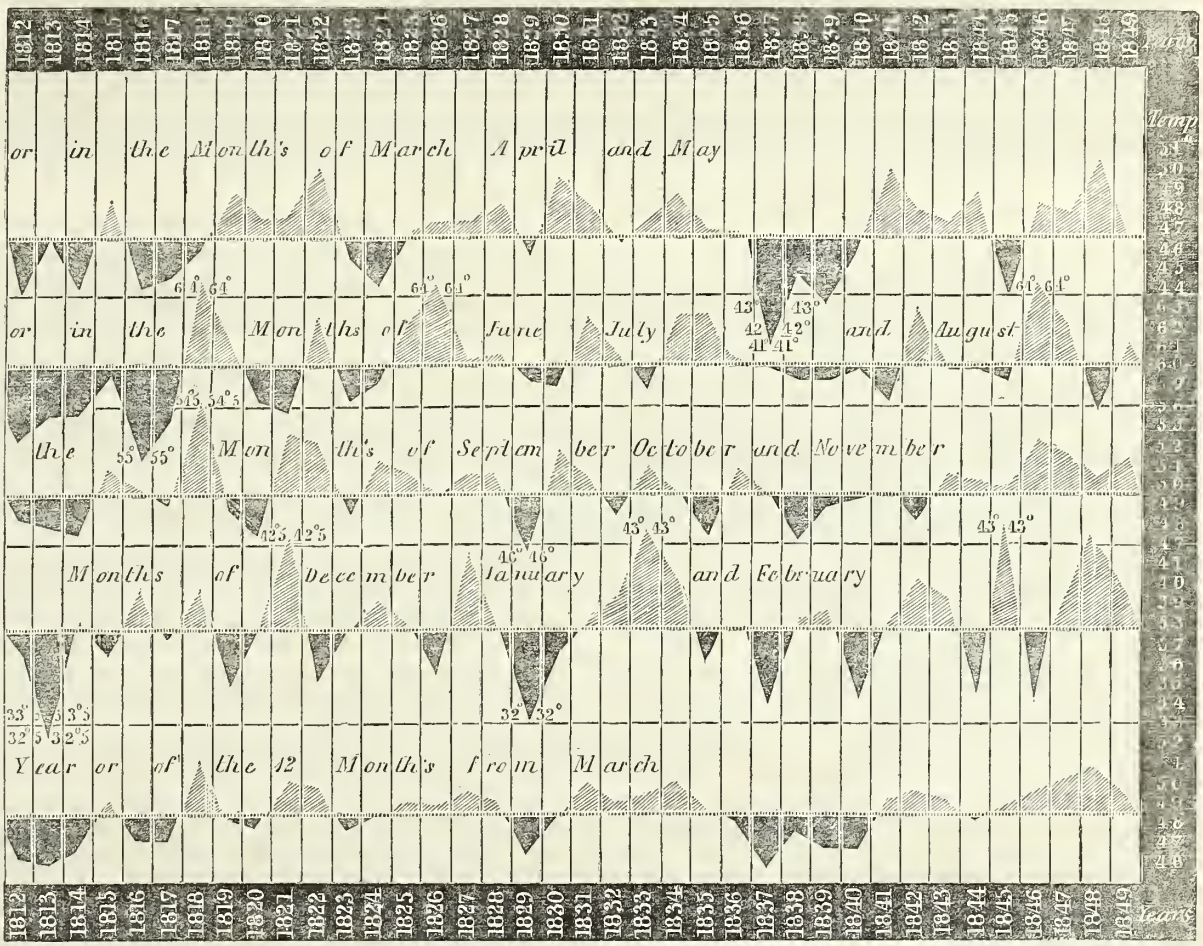
1775.—The weather was mild at the beginning of the year. The summer was dry and hot. Thunder-storms were frequent in autumn. The year was very fine; and grain was cheaper than it had been for many years past.

1776.—In January there fell a greater quantity of snow than had fallen for some years, and the frost was supposed to have been the most severe since 1740. The frost went away at the beginning of February, and the weather following was mild and wet. It became hot about the middle of April. May was cold and dry, with north winds. After this, the weather was mostly fine till the end of December, when there was a sharp frost.

1777.—The year began with a sharp frost, and heavy falls of snow continued till towards the end of February. For a few days about Lady-day the weather was unusually hot, the reading of the thermometer being nearly 70°; after this the weather was windy and cold till June. The latter part of the summer and autumn was fine. The year ended with frost and snow.

1778.—There were frost and snow at the beginning of the year. The beginning

THE YEAR, FOR EVERY YEAR FROM 1774 TO 1849, AT THE ROYAL OBSERVATORY, GREENWICH.



The dark spaces denote that the Temperature was below the average, and the light spaces denote that the Temperature was above the average.—The distance from the dotted lines denotes the departure from the mean of the period.

of April was fine. The summer was fine and hot; supposed at the time to have been as fine a summer as that of 1762, if not as fine as the summer of 1750. Frosty mornings began in September, but were less frequent afterwards. On the last day of this year there was a violent storm, supposed by some to have been as violent as that of 1703.

1779.—After the beginning of January there was no frost. The spring months were remarkably warm. In February, wall-fruit flowered. The middle of April was quite hot, as was the summer and autumn. About the middle of November there was a little frost; and again on December 22. There was much sickness this year.

1780.—This year began with a frost almost as severe as that in 1772: there was not much snow, and the weather continued severe till near the end of February. The month of March was warm. It was hot from July to September, and mostly mild till Christmas, when a frost set in. The year was sickly.

1781.—There was a little frost at the beginning of the year. The spring was mild; the summer was hot; and the ground was much burned. Autumn was fine and pleasant; and there were only a few frosty mornings during the remainder of the year.

1782.—The beginning of the year was mild, but in February it was frosty, and the remainder of the winter was severe. The spring was cold. Nearly twelve inches of rain fell in April and May. The weather was fine in June, but bad afterwards. The autumn was cold. It was severe in November, and during the first half of December.

1783.—The spring was pleasant, with frosty mornings very constant till near April. A remarkable haze was prevalent all over Europe during the summer. The autumn was fine, and the weather was mostly mild till the last week in December, when a great fall of snow took place.

1784.—There was steady frost, with snow, till February 21; and till the end of March the mornings were frosty; and at the end of March there were cold winds, with snow. This weather continued till the middle of April; and till the first week in May frosty mornings were frequent, and the remainder of May was exceedingly hot. There were a few hot days in July; but the weather was precarious throughout the autumn; and in December the frost was as severe as it was in January.

1785.—The severe frost of the preceding month broke early in January; but on the last day of January a second very severe frost set in, and continued till the middle of March. The winter was most severe; the summer and part of autumn were showery; a heavy fall of snow took place at Christmas, and severe frost.

1786.—The frosts at the beginning of the year were of short duration. From the beginning of March there was a most severe frost of a fortnight's duration. Cold E. and N.E. winds were prevalent, with frosty mornings, till the beginning of May. June and July were moderately fine; August was cold and showery; and from this time to the end of the year there was a great deal of rain.

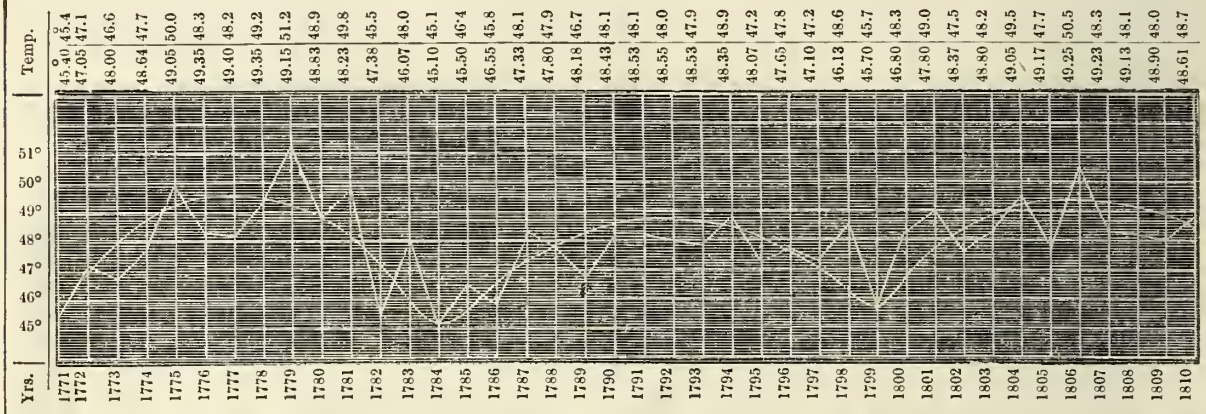
1787.—The year began with open weather. April was cold, with N. winds, and vegetation was stopped; during April and May frosty mornings were fre-

quent; and there was a sharp frost on the morning of the 7th of June; and it was a cold summer; the autumn was mild; and there was a heavy fall of snow and a week's frost at the end of the year.

1788.—January and February were mild, the latter month being wet. There was a fortnight's frost in March; there were several periods of hot weather in April, May, and June. The summer was in general dry; autumn was fine; there was a gentle frost at the beginning of December, then an exceedingly severe frost set in, with heavy falls of snow, which continued to the end of the year. This year was remarkable for the abundance of fruits, &c.

1789.—Very heavy storms of wind and snow took place till the middle of January, and great rivers were frozen over; there was a great loss of fish in ponds from the severity of the cold. After the frost broke the weather was mild, but windy and wet. During March there were nearly constant N. winds, and heavy falls of snow were frequent, with sharp frost. The summer was

CURVE OF MEAN ANNUAL TEMPERATURE OF



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45.4	47.1	46.6	47.7	50.0	48.3	48.2	49.2	51.2	48.9	49.8	45.5	48.0	45.1	46·4	45.8	48.1	47.9	46.7	48.1	48.1	48.0	47.9	48.9	47.2	47.8	47.2	48.6	45.7	48.3	49.0	47.5	48.2	49.5	47.7	50.5	48.3	48.1	48.0	48.7
45.40	47.05	48.00	48.64	49.05	49.35	49.40	49.35	49.15	48.83	48.23	47.38	46.07	45.10	45.50	46.55	47.33	47.80	48.18	48.43	48.53	48.55	48.53	48.35	48.07	47.65	47.10	46.13	45.70	46.80	47.80	48.37	48.80	49.05	49.17	49.25	49.23	49.13	48.90	48.61

The upper numbers show the mean temperature of each year, and those immediately under them show the equated value.

mostly wet. August was fine; after which it was again wet, and continued so to the end of the year, with scarcely any frost.

1790.—The weather was mild and open till April, when the first snow fell in the year; and the weather, during the beginning of this month, was the most severe during the winter. The summer was cold, cloudy, and windy; autumn was fine and pleasant; December was stormy, with very changeable weather.

1791.—Till January 6th there was frost; after this, the weather was mild till towards the end of April. There were many frosty mornings, with cold N.E. winds, in May. The former part of the summer was cold: frosty mornings were frequent till the middle of June, the latter part of summer, and autumn. During November and December there were frequent storms, and falls of snow and frost.

1792.—There were frequent sharp frosts till March, with stormy and wet weather: the beginning of March was mild; after this there was a frost of a week's duration. The summer was wet and cold; the autumn was wet, and December was cloudy, with very little frost. This year was very wet.

1793.—January and February, and beginning of March, were mild; a frost set in at the end of March; there was a great fall of snow in the first week in April. The former part of the summer was cold, with frequent frosty mornings till June; July was wet; the autumn was fine, mild, and calm; and there was no frost till the end of the year.

1794.—The year began with slight frost, which continued till the end of January; February was very mild; the spring was warm till May, which was cold; July was hot; the autumn was wet, but mild, as was the first part of December; but the weather during the latter half of the month was severe, with heavy snow.

1795.—The frost began about the middle of December, 1794; was excessively severe in January, and continued till the end of March. There were very large falls of snow, and the consequent floods were so great that nearly all the bridges in England were injured. Some snow fell in April. The summer was cold, with frequent frosty mornings till June; there were some hot days in July, but it was generally cold; after this, the weather was fine till autumn. In December much injury was done to shipping by the strong S. and S.W. winds: there was no frost.

1796.—January was remarkably warm, with occasional thunder-storms. There was no frost till March, and then of no long duration. The summer was cool; the autumn was fine, with a few frosty mornings at the end of November; in December a severe frost set in, and the reading of the thermometer in many places, on the 24th, was below zero of Fahrenheit's scale.

1797.—During a few days in January the frost continued; after this, to the end of March, scarcely any rain fell; and the weather was fine, with frequent frost. From April to September there were frequent rains. The summer was cold; there was some warm weather in July; the autumn in general fine; and the weather continued open till the end of the year.

1798.—With the exception of a few slight frosts, which occasionally occurred till March, the weather was open and mild. The summer was fine, as was autumn and the beginning of December; after this a severe frost set in, and the reading of the thermometer was as low as 5°.

1799.—The severe frost which set in about the middle of the preceding month, continued to the middle of January, and again set in towards the end of the month, with much snow, which continued during the first week in February; some snow fell in March, and the mornings were frosty till the end of the month. From April to the middle of November was wet; December was foggy; and after the 17th a severe frost set in, with snow falling. The whole year was very cloudy.

1800.—During the first and the last three months the weather was unsettled and rough; the summer was moderately fine.

1801.—The sky was very cloudy during the first four months, and snow fell as late as the middle of April; rain fell frequently in May and June; summer and beginning of autumn were fine; snow fell towards the end of November; November and December were moderate.

1802.—With the exception of July, which was wet and cold, the year was moderately fine.

1803.—A cold, dry spring. Snow fell in February. June was cold and wet. A moderately fine summer and autumn, and an open winter.

1804.—January was warm. Some snow fell occasionally till the end of March. Summer and autumn warm; an open winter.

1805.—With the exception of autumn, which was warm, the year was generally cold.

1806.—January was wet and warm. Some snow fell in February, and the sky was clouded till the end of April; and after this the weather was generally fine till the end of the year.

1807.—Spring was cold; snow fell till near the end of April. May wet. Summer fine; autumn cloudy. Snow fell in November and December.

[The following particulars of each year have been extracted from a paper published by H. Cox, Esq.:—]

1808.—April 19, a heavy fall of snow for four hours. A fine, productive harvest.

1809.—Last week in April very cold, wet, frosty, and unpleasant weather. May came in fine and hot.

1813.—An immensely productive harvest, and a general thanksgiving for it.

1814.—January 4, the deepest snow that had been known for forty years began—was some days falling—continued on the ground for five weeks; at places the drifts were fifteen feet high. The frost continued twelve weeks, to March 20th.

1816.—From April 12 to 15 snow remained on the ground, and the weather was severe and frosty. September 3, a severe frost, which produced ice.

1817.—The month of August very wet, succeeded in September by fine harvest weather.

1818.—May 8, a deluge of rain fell; after which no more fell at or near Trevereux till September 5, being seventeen weeks and one day, during which all vegetation was completely burnt up.

1819.—October 22, snow six inches deep.

1822.—No rain from May 2 to July 5: nine weeks of very hot days.

1823.—Rain, little or much, every day from June 29 to August 15—forty-seven days.

1824.—A very wet summer, but not cold. Crops of corn light, of hay heavy.

1825.—Sold the produce of twelve acres of hops for five shillings: the crop was gathered, and proved to be twenty-four pounds in weight.

1826 and 1827.—Two fine summers.

1828.—Very heavy rain every day from July 6 to August 14.

1829.—Though the 9th of April is stated as the day on which oat-sowing was finished, yet an experiment was tried by sowing White-gate field with black tartar oats on the 13th of May. The weather was much against them at first, but they turned out well, and were carried on the 6th of October, the last load going into the barn white with snow. Rain, more or less, every day from June 16 to September 20, being ninety-six days (except on four of them, 23rd and 24th of July, and 3rd and 4th September). The season was not particularly cold, but the wettest in my memory. (H. C.)

1830.—A severe frost till February 7th. March was fine, dry, and warm, without a storm or a shower. April 1 was snowy till noon, whilst a swallow was seen flying about at Trevereux.

1831.—On the 6th of May occurred a most severe frost; the young shoots of the ash and oak were destroyed, fruit trees of all sorts were greatly injured, and even the meadow grass was checked to such a degree that it never recovered from its effects. Ice was nearly half an inch thick on the ponds on the common. *Note*—A severe frost occurred on the night of May 28, 1819, but inferior in its effects to the last described.

1834.—A fine, dry, warm summer.

1835.—April 16 and 17, a fall of snow for two days. Although the 20th of August was noted as the time of the first and largest flight of swallows, yet it was observed that many remained longer, and they were not all gone this year until October 20th. There are always many stragglers which remain longer than the principal flight, and some few, which appear to have lost their instinct, remain until the winter kills them by starvation and cold.

1836.—September 1, swallows almost all gone. October 29, snow fell in a frosty state of weather, and remained on the ground a week. December 24, much snow fell at night, which, in many places being drifted, stopped the roads for several days.

1838.—January 8, a very severe frost commenced, and it continued about five weeks, with some snow, the thermometer being 5° or 6° below zero: most of the evergreen shrubs were killed down to the ground. April 16, continued snow-storms until the 20th, and very cold. September 10, swallows more than half gone.

1839.—May 14, small snow for four hours in the morning; 15th and 16th, much more, with severe frost at night. September, 1839, an extremely wet month; many floods; continued wet throughout the autumn and winter. At harvest, this year, a single grain of wheat planted in October, 1838, in my garden, without extra cultivation, produced 2800 grains of wheat on 64 straws.

1840.—Began with continued rain, until the middle of February, then a dry spring and summer, until August 17th. The crop of hay was less than half a load per acre.

1841.—Wet summer, autumn, and winter.

1842.—A dry summer. The swallows began to leave on the 2nd September, most about the 15th. Hay short this year.

1843.—Hay abundant.

1841.—August 15, swallows many gone. A long and severe winter, until March 20, 1845.

1845.—Very wet summer. Haymaking from July 7 to September 6.

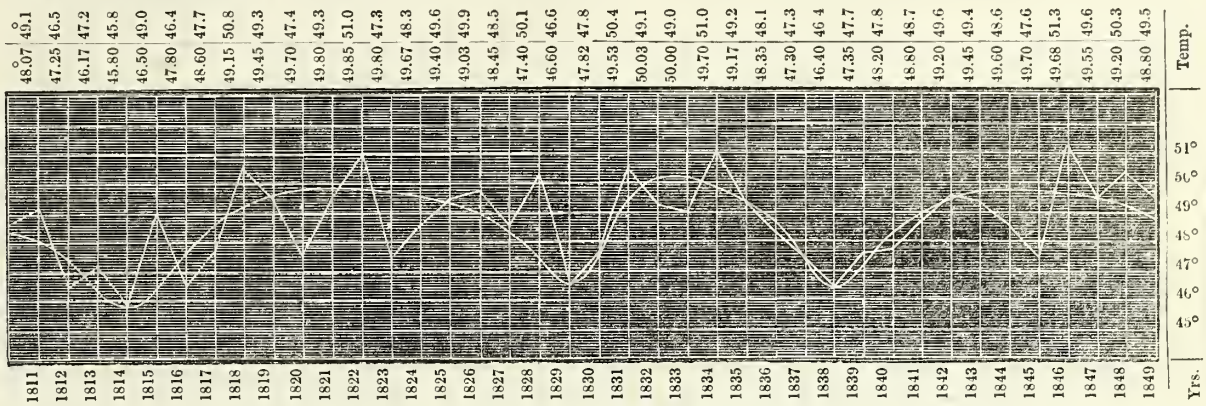
1846.—Backward spring and very dry summer.

1847.—Same as 1846. Swallows almost all gone, August 22.

1848.—Wet winter and spring, until middle of April, then a parching drought to June 12th; wet summer and autumn after, until Christmas. The corn of all sorts much grown and spoiled with wet. August 1, on account of the extreme wetness of the season, many of the martens and some of the swallows disappeared.

1849.—April 16 to 20, much snow and frost. The Westerham Coach was buried and left all night in a snow-drift, on Titsey Hill, April 19th. A fine summer.

THE AIR, FOR EVERY YEAR FROM 1771 TO 1849.



1771	1772	1773	1774	1775	1776	1777	1778	1779	1780	1781	1782	1783	1784	1785	1786	1787	1788	1789	1790	1791	1792	1793	1794	1795	1796	1797	1798	1799	1800	1801	1802	1803	1804	1805	1806	1807	1808	1809	1810
48.07	47.25	46.17	45.80	46.50	47.80	48.60	49.15	49.45	49.70	49.80	49.85	49.80	49.67	49.40	49.03	48.45	47.40	46.60	47.82	49.53	50.03	50.00	49.70	49.17	48.35	47.30	46.40	47.35	48.20	48.80	49.20	49.45	49.60	49.70	49.68	49.55	49.20	48.80
49.1	46.5	47.2	45.8	49.0	46.4	47.7	50.8	49.3	47.4	49.3	51.0	47.3	48.3	49.6	49.9	48.5	50.1	46.6	47.8	50.4	49.1	49.0	51.0	49.2	48.1	47.3	46 4	47.7	47.8	48.7	49.6	49.4	48.6	47.6	51.3	49.6	50.3	49.5

The upper numbers show the mean temperature of each year, and those immediately under them show the equated value.

Various diagrams and curves were laid down from the preceding results, with the view of discovering a law. One of these curves—that intending to show the curve of mean annual temperature—was formed mechanically by bisecting the lines joining the mean temperature of consecutive years, and finally drawing a curve line by the hand, passing through these points. This curve exhibited several well-marked periods. It was found that about the year 1771 there was a batch of cold years; another about 1784; again at 1799, and in 1814; and these periods were separated from each other by about fifteen years—the temperature of the years between these times being for the most part warmer than any of them. It then occurred to Hugh Gordon, Esq., late of the Ordnance Office, Dublin, who, at Mr. Glaisher's request, had discussed these observations, that the waved curve indicated a succession of parts of ellipses; and he therefore determined to equate the several yearly temperatures by elliptic equations, by starting from one lowest point to the next. The results of thus treating the numbers are shown in the above diagram, whose elliptically equated curve shows in a very marked manner the cycle of the great variable mean temperature. The summation of the mean temperatures in each cycle equals the summation of the recorded mean temperatures within the same period.

If this curve approximates to the true curve of mean temperature, the secondary causes at times in operation must be very great, as may be seen by the great departures from the curve in the years 1821 to 1823, &c.

DISCOVERY OF TWO NEW PLANETS IN THE YEAR 1850.

On May 11, 1850, Dr. Annibal de Gasparis, assistant at the Royal Observatory at Naples, discovered a small planet, and which he named "Parthenope."

PLACE IN THE HEAVENS OCCUPIED BY THE NEW PLANET "PARTHENOPE," ON ITS DISCOVERY BY DR. ANNIBAL DE GASPARIS, ON MAY 11, 1850.

On September 2, 1850, Mr. Hind, at Mr. Bishop's Observatory, Regent's-park, discovered another small planet, making the third he has discovered, and which he has named "Victoria."

The orbits of both these planets are situated between those of Mars and Jupiter, and they make twelve of those small planets thus situated. Their places in the heavens at the times of discovery are shown in the annexed diagrams.

PLACE IN THE HEAVENS OCCUPIED BY THE NEW PLANET "VICTORIA," ON ITS DISCOVERY BY MR. HIND, ON SEPTEMBER 20, 1850.

DISCOVERY OF A SECOND SATELLITE OF NEPTUNE.

LETTER FROM MR. LASSELL TO THE ASTRONOMER ROYAL.

(*From the Monthly Notice of the Royal Astronomical Society, Vol. X., No. 8.*)

"STARFIELD, 14th August, 1850.

"My dear Sir,—I have strong reason to suspect that I have to-night detected a satellite of Neptune.

"Last night, the 13th instant, at about 11h. 0m., I observed the satellite of Neptune for the first time this season, and made a diagram of it—the satellite being towards its southern elongation. The sky was extremely unfavourable; and, finding that no measures of either position or distance could be taken with any chance of accuracy, I attempted none.

"To-night, in a somewhat better, but still bad sky, I see what I can conceive to be another satellite, in the line of northern elongation of the old satellite, and about two diameters distant.

"This cannot well be the satellite already known, which ought to be almost preceding the planet, and, in that position, is generally invisible. There can be no question of the reality of the observations; the satellite of to-night (considerably fainter than that of last night) being repeatedly and almost constantly seen, with various powers—*e.g.* 316, 479, 628. The position of the satellite is, as I have said, very nearly in the direction of the greatest northern elongation of the old one, and, being barely two diameters of the planet distant, may, probably, be inferior to it.

"The sky became cloudy shortly after eleven, and remained so, which prevented any confirmatory observations of motion. But I think the hypothesis of a fixed star of a similar magnitude, and in the precise direction, being located there, is too unlikely, to throw much doubt upon the discovery."

TIMES OF THE POLE STAR BEING ON THE MERIDIAN, OR DUE NORTH, DURING THE YEAR 1851.

Jan.	1, at	6h.	21m.	19s.	A.M.	below the Pole, and	6h.	22m	21s.	P.M. above the Pole.
Feb.	1	„	4	22	0	„	4	20	2	„
March	1	„	2	31	36	„	2	29	38	„
April	1	„	0	29	33	„	0	27	36	„
May	1	„	10	29	44	above the Pole	10	27	46	below the Pole.
June	1	„	8	28	8	„	8	26	10	„
July	1	„	6	30	35	„	6	28	37	„
Aug.	1	„	4	29	6	„	4	27	8	„
Sept.	1	„	2	27	32	„	2	25	34	„
Oct.	1	„	0	29	45	„	0	27	48	„
Nov.	1	„	10	25	54	below the Pole	10	23	56	above the Pole.
Dec.	1	„	8	27	43	„	8	25	45	„
Dec.	31	„	6	29	23	„	6	27	25	„

From these times, those of the meridian passage of the star can be easily calculated for any other day in every month.

POINTS RELATING TO THE EXHIBITION OF WORKS OF INDUSTRY OF ALL NATIONS IN 1851.

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Luton—Austin, C
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Poole—Welch, M K
Pontefract—Colemau, H J
Port Glasgow—Stewart, J
Portsmouth—Deacon, H; Howard, J
Preston—Cartwright, S
Ramsgate—Burgess, G
Reading—Lovejoy, G
Redruth—Peters, J L
Reigate—Martin, P
Retford (East)—Phillips, W
Richmond (Yorkshire)—Cooke, L
Ripon—Nicholson, R W
Rochester—Prall, R
Romsey (Hants)—Daman, W
Rotherham—Barras, J
Rugby—Highton, Rev H
Runcorn—Simpson, J
Rye—Dawes, E N
Saffron Walden—Spurgen, T
Salisbury—Lee, L C
Scarborough—Moody, J J P
Selby—Lowther, G, Standering, T
Selkirk—Rodger, P
Settle—Robinson W; Wildman, J
Sheerness—Keddell, J T
Sheffield—Plimsoll, S
Shrewsbury—Pidgeon, H
Sidmouth—Radford, G
Skipton—Atkinson, J; Greenwood, R
Southampton—Deacon, C E
Southport—Lewis, R
Sonth Molton—Pearse, J; Riccard, R M
South Shields—Elliott, R; Stevenson, A
Spalding—Watkinson, H
Stafford—Turnock, J
Stafford. Potteries—Battam, T
Stamford—French, W
St. Andrew's—Murray, W
St. Albans—Langley, A
St. Austell—Drew, J H
St. Colnmb—Collins, G B
St Helen's—Fincham, F
St Neot's—Wilkinson, J
Stirling—Boyd, A; Morrisou, P G
Stockport—Vaughan, J
Stockton—Crosby, J; Laing, J
Stonehaven—Robertson, the Hon Sheriff
Stonehonse (Plymonth)—Rodd, R; Maun, J P
Stonrbridge—Gibson, G W
Stroud—Freston, W A
Sudbury—Gooday, J F S
Sunderland—Candlish, J; Snowball, W
Swansea—Francis, G G
Tamworth—Thompson, J
Taunton—White, E
Tavistock—Luxton, R; Vosper, A S M
Tewkesbury—Thomas, J
Thorne—Beckett, W B
Tiverton—Hellings, T; Forwood, T W J
Torpoint—Captain Westmacott
Torrington—Braginton, G; Glubb, W G
Totnes—Seaman, H
Tring—Faithful, H
Truro—Simmons, G N
Uttoxeter—Bladen, T
Wakefield—Witham, J
Walsall—Newman, J W
Waltham Abbey—Jessop, L
Wallingford—Atkinson, K
Wareham—Filliter, F; Fike, J
Warrington—Marsh, J F
Warwick—Tibbits, J
Waterford—Nevins, H N
Wellington (Salop)—Benson, J
Wellington (Somerst.)—White, F
Wells—Davies, R
Wexford—Dillon, Rev E
Whitby—Cramp, W H; Belcher, H
Whitehaven—Armitstead, R
Wigan—Acton, T
Winchester—Bailey, C
Windsor—Voules, C S
Wirksworth—Whittaker, J Wisbeach
Witham—Walford, S, jun
Wolverhampton—Walker, T
Wolverton—Allen, J G
Woodstock—North, —
Wootton Bassett—Drake
Wotton-und.-Edge—Foxwell, W G
Worcester—Webb, E; Purchas, S
Workington—Armstrong, G
Worthing—Tribe, W F
Yarmouth—Palmer, C J
Yeovil—Batten, J, jun
York—Munby, J; Richardson, H
Zetland and Shetland—Greig, A

GENERAL CONDITIONS.

The Commissioners will be prepared to receive all articles which may be sent to them, on or after the 1st of January, 1851, and will continne to receive goods until tho 1st of March inclusive, after which day no further goods will be received. Exhibitors will be required to deliver their objects, at their own charge and risk, at the building in the Park. The building will be provided to the exhihitors free from rent. The productions of all nations will be admitted. Arrangements have been made by 13 and 14 Vic, c. 104, (passed 14th Angnst, 1850), for tho protection of certain articles which may be exhibited, from piracy of the design.

ARRANGEMENTS FOR THE VISITS OF THE WORKING-CLASSES.

With the view of affording information, a register has been opened at No 1, Old Palace-yard, Westminster, by the Secretary of the Executive Committee for the Exhibition of 1851, in which will he entered the names and addresses of persous disposed to provide accommodation for artizans from the country whilst visiting

the Exhibition next year. Copies of this register of lodgings may be had on application. Other arrangements are under consideration for guiding the working-classes on their arrival by the trains to the lodgings they may select. The register contains a column in which the particulars, &c. of the accommodation each party proposes to afford will be entered. All applications for participating in these arrangements must be made through local committees. It must be clearly understood, that, whilst her Majesty's Commissioners are desirous of collecting the fullest information likely to be serviceable to the working-classes, they do not propose to charge themselves in any respect with the management, but simply to afford information.

SPECIAL INSTRUCTIONS TO COLONIAL AND FOREIGN EXHIBITORS.

Colonial and foreign productions will be admitted without paying duty, for the purposes of exhibition, but not for internal consumption. Her Majesty's Commissioners of Customs will consider all such articles as bonded goods.

ARRANGEMENTS MADE BY THE BOARD OF CUSTOMS.

That all works intended for the Exhibition will, in the first instance, be admitted into this country without payment of duty; the goods will not be subject to examination at the water-side, but be conveyed to the place of exhibition, at the expense of the importer, under charge of proper officers of the Customs, to be there opened by the importer or agent, and examined in the presence of the proper officer of the Customs, in order to assess the amount of duty which would become payable thereon if sold in this country, and such marks attached thereto as may be necessary to maintain the identity of the goods. The goods brought for exhibition will be considered as warehoused, under the warehousing regulations, in the premises appointed for the Exhibition; and security must be given in each case for the due re-exportation of the goods, or payment of the duty, at the close of the Exhibition. No goods liable to duty to be on any account removed from the premises until the termination of the Exhibition, and then only on payment of the duty, or for re-exportation.

THE PRIZES AND JURIES.

Her Majesty's Commissioners have had under their consideration the subject of the prizes to be awarded to exhibitors, and have resolved to take immediate steps for having (three) medals struck of various sizes and designs, it being their opinion that this is the form in which it will, generally speaking, be most desirable that the rewards should be distributed. They have decided to select bronze for the material in which the medals are to be executed, considering that metal to be better calculated than any other for the development of superior skill and ingenuity in the medallic art, and at the same time the most likely to constitute a lasting memorial of the Exhibition. It is the intention of the Commissioners to reward excellence in whatever form it is presented, and not to give inducements to the distinctions of a merely individual competition. Although the Commissioners have determined on having three medals of different sizes and designs, they do not propose to instruct the Juries to award them as first, second, and third in degree for the same class of subjects. No competitor for a prize in any section will be allowed to act upon a jury to award the prizes in that section. The names of persons selected to act on these juries will be published when decided upon. All persons, whether being designers or inventors, the manufacturers or the proprietors, of articles, will be allowed to exhibit; but they must state the character in which they do so. They may also state the names of all or any of the parties who have aided in the production. In awarding the prizes, however, it will be for the juries to consider, in each individual case, how far the various elements of merit should be recognised, and to decide whether the prize should be handed to the exhibitor, or to one or more of those who have aided in the production.

CLASSIFICATION.

The articles exhibited will be divided into four sections:—

Section I.—Raw Materials and Produce—illustrative of the natural productions on which human industry is employed.

Section II.—Machinery for Agricultural, Manufacturing, Engineering, and other purposes, and Mechanical Inventions—illustrative of the agents which human ingenuity brings to bear upon the products of nature.

Section III.—Manufactures—illustrative of the result produced by the operation of human industry upon natural produce. Designs for Manufactures are to be admitted in the same section with the class of articles for which they are proposed.

Section IV.—Sculpture, Models, and the Plastic Arts generally—illustrative of the taste and skill displayed in such applications of human industry. Articles belonging to one section may be admitted to another, where they may be considered necessary, but in such cases for illustration only.

CHIEF POWERS OF EUROPE.

DATE OF BIRTH AND ACCESSION OF THE PRESENT RULERS.

State.	Title of Ruler.	Date of Birth.	Date of Accession.
Austria	Francis Joseph I.	18 Aug. 1830	2 Dec. 1848
Baden	Gr. Du. Chas. Leop. Fred.	29 Aug. 1790	30 Mar. 1830
Bavaria	King Maximilian II.	28 Nov. 1811	21 Mar. 1848
Belgium	King Leopold Geo. Fred.	10 Dec. 1790	21 July 1831
Britain, Great	Queen Victoria	24 May 1819	20 June 1837
Denmark	King Frederick VII.	6 Oct. 1808	20 Jan. 1848
France	Pres. Louis Napoleon.		
Greece	King Otho	1 June 1815	6 Feb. 1833
Hanover	King Ernest	5 June 1771	20 June 1837
Netherlands	King William III.	19 Feb. 1817	17 Mar. 1849
Poland (New Kingdom) is a Vice-Regality of Russia			
Popedom	Pius IX.	13 May 1792	16 June 1846
Portugal	Queen Maria da Gloria	4 Apr. 1819	2 May 1826
Prussia	King Fred. William IV.	15 Oct. 1795	7 June 1840
Russia	Emperor Nicholas	7 July, 1796, O.S.	1 Dec. 1825, O.S.
Sardinia	King Victor Emanuel	14 Mar. 1820	27 Mar. 1849
Saxony	Frederick Augustus	22 May 1797	6 June 1836
Spain	Queen Isabella II.	10 Oct. 1830	29 Sept. 1833
Sweden & Norway	King Oscar	4 July 1799	8 Mar. 1844
Switzerland	(A Republic.)		
Turkey	Abdul Medjid, Sultan	6 May 1822	30 June 1839
Tuscany	Grand Duke Leopold II.	3 Oct. 1797	18 June 1824
Two Sicilies	Ferdinand II.	12 Jan. 1810	8 Nov. 1830
Wurtemburg	King William	27 Sept. 1781	30 Oct. 1816

THE QUEEN AND ROYAL FAMILY.

THE QUEEN.—Victoria, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, was born May 24th, 1819; succeeded to the throne, June 20th, 1837, on the death of her uncle, King William IV.; crowned, June 28th, 1838, and married, February 10th, 1840, to his Royal Highness Prince Albert. Her Majesty is the only daughter of his late Royal Highness Edward Duke of Kent, son of King George III.

His Royal Highness Francis-Albert-Augustus-Charles-Emannol-Busici, Duke of Saxe, Prince of Coburg and Gotha, K.G., Consort of her Majesty, born August 26th, 1819.

Her Royal Highness Victoria-Adelaide-Mary-Louisa, Princess Royal, born November 21st, 1840.

His Royal Highness Albert-Edward, Prince of Wales, born November 9th, 1841.

Her Royal Highness Alice-Maud, born April 25th, 1843.

His Royal Highness Alfred-Ernest-Albert, born August 6th, 1844.

Her Royal Highness Princess Helena-Augusta-Victoria, born May 25, 1846.

Her Royal Highness Princess Louisa-Carolina-Alberta, born March 18, 1848.

His Royal Highness Arthur-William-Patrick-Albert, born May 1, 1850.

Ernest-Augustus, Duke of Cumberland, in Great Britain, and King of Hanovea, uncle to her Majesty, born June 5th, 1771; married, August 29th, 1815. Issue, George-Frederick.

Mary, Aunt to her Majesty, born April 25th, 1776; married, July 22nd, 1816, her cousin, the Duke of Gloucester, deceased.

Victoria-Mary-Louisa, Duchess of Kent, born August 17th, 1786; married, in 1818, the Duke of Kent (who died January 23rd, 1820); her Majesty's mother.

Augusta-Wilhelmina-Louisa, Dowager Duchess of Cambridge, niece of the Landgrave of Hesse, born July 25th, 1795; married, in 1818, the late Duke of Cambridge, by whom she has issue, George-William, Augusta-Caroline, and Mary-Adelaide.

George-Frederick-Alexander-Charles-Ernest-Augustus, K.G., only child of the King of Hanover, Prince Royal of Hanover, cousin to her Majesty; born May 27th, 1819; married, February, 1843, Princess Mary of Saxe-Altenberg, and has a son.

George-Frederick-William-Charles, K.G., Duke of Cambridge, cousin to her Majesty, born March 26th, 1819.

Augusta-Caroline-Charlotte-Elizabeth-Mary-Sophla-Louisa, daughter of the late Duke of Cambridge, and cousin to her Majesty, born July 19th, 1822; married, June 28th, 1843, Frederick, Hereditary Grand Duke of Mecklenburg-Strelitz.

Mary-Adelaide-Wilhelmina-Elizabeth, daughter of the late Duke of Cambridge, and cousin to her Majesty, born November 27th, 1833.

THE QUEEN'S HOUSEHOLD.

Lord Great Chamberlain	Lord Willoughby D'Eresby
Lord Steward	Marquis of Westminster
Lord Chamberlain	Marquis of Breadalbane, K.T.
Vice-Chamberlain	Lord E. Howard
Master of the Horse	Duke of Norfolk
Clerk Marshal and Chief Equerry	Lord Alfred Paget
Treasurer of the Household	Lord Marcus Hill
Comptroller of the Household	Right. Hon. W. S. Lascelles
Lord High Almoner	Bishop of Oxford
Sub-Almoner	Rev. G. Goodenough, D.D.
Clerk of the Closet	Bishop of Chester
Master of the Buckhounds	Earl of Besshorough
Comptroller of Accounts	Sir William Martins
Master of the Household	Major-General Bowles
Captain of the Yeomen of the Guard	Marquis of Donegal
Captain of Gentlemen-at-Arms	Lord Foley
Lords in Waiting	Earl of Listowel, Lord Camoys, Lord Waterpark, Lord Elphinstone, Earl of Morley, Lord Byron, Lord Dufferin, Marquis of Ormonde
Mistress of the Robes	The Duchess of Sutherland
Ladies of the Bedchamber	Countess of Mount-Edgecumbe, Marchioness of Douro, Countess of Desart, Countess of Gainsboro', Countess of Charlemont, Viscountess Jocelyn, Viscountess Canning, Lady Portman
Extra Lady of the Bedchamber	Duchess of Norfolk.
Physicians	Charles Locock, M.D., Sir James Clark, Bart., and W. F. Chambers, M.D.
Surgeons	Sir B. Brodie, Bart., and R. Keate, Esq.

HER MAJESTY'S MINISTERS.

OF THE CABINET.

First Lord of the Treasury (Premier)	Lord John Russell
Lord Chancellor	Lord Truro
Lord President of the Council	The Marquis of Lansdowne
Lord Privy Seal	The Earl of Minto
Secretaries of State: Home	Sir George Grey, Bart.
Secretaries of State: Foreign	Lord Palmerston
Secretaries of State: Colonial	Earl Grey
Chancellor of the Exchequer	The Rt. Hon. Sir Charles Wood
President of the Board of Control	Sir J. C. Hobhouse
President of the Board of Trade	Rt. Hon. H. Labouchere
First Lord of the Admiralty	The Right Hon. Sir F. Baring, Bart.
Chancellor of the Duchy of Lancaster	Earl of Carlisle
Chief Commissioner Woods and Forests	Lord Seymour
Postmaster-General	The Marquis of Clauricarde

IRELAND.

Lord Lieutenant	The Earl of Clarendon
Lord Chancellor	The Right Hon. M. Brady
Chief Secretary	The Right Hon. Sir W. Somerville, Bart.
Attorney-General	John Hatchell, Esq.
Solicitor-General	Henry George Hughes, Esq.

SCOTLAND.

Lord High Constable	The Earl of Errol
Lord Privy Seal	Viscount Melville
Lord Advocate	Right Hon. A. Rutherford

GOVERNMENT OFFICES AND OFFICERS.

TREASURY,
WHITEHALL.

LORDS COMMISSIONERS.

Lord J. Russell, Sir Chas. Wood, Bart., H. Rich, Esq., R. M. Bellew, Esq., Sir W. G. Craig
Secretaries, the Right Hon. W. G. Hayter, G. C. Lewis, Esq.
Assistant Secretary, Sir C.E. Trevelyan, K.C.B.
Principal Clerk, S. R. Leake, Esq.
Solicitor, G. Maule, Esq.

EXCHEQUER,
WHITEHALL-YARD.

Chancellor, the Right Hon. Sir Charles Wood, Bart.
Comptroller, Lord Monteagle
Assistant, A. Eden, Esq.
Chief Clerk, F. F. Ottey, Esq.
Accountant, G. S. Frederick, Esq.

HOME OFFICE,
WHITEHALL.

Secretary of State, Sir George Grey, Bart.
Under-Secretaries, H. Waddington, Esq., the Hon. E. P. Bouverie, M.P.
Chief Clerk, H. J. Knyvett, Esq.
Private Secretary, H. Brand, Esq.

FOREIGN OFFICE,
DOWNING-STREET.

Secretary of State, Lord Palmerston
Under-Secretaries, Lord Eddisbury, H. U. Addington, Esq.
Chief Clerk, G. L. Conyngham, Esq.
Private Secretary, the Hon. Spencer Ponsonby

COLONIAL OFFICE,
DOWNING-STREET.

Secretary of State, Earl Grey
Under-Secretaries, B. Hawes, Esq., M.P., H. Merivale, Esq.
Assistant Secretary, T. F. Elliot, Esq.
Chief Clerk, Peter Smith, Esq.
Private Secretary, the Hon. H. C. Grey.

IRISH OFFICE,
18, GREAT QUEEN-STREET, WESTMINSTER.

Chief Secretary, the Right Hon. Sir W. M. Somerville, Bart.
Chief Clerk, George Trundle, Esq.
Assistant, Hon. S. D. Montague
Private Secretary, H. Meredyth, Esq.
Counsel, E. Batty, Esq.

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WHITEHALL.

President, the Rt. Hon. H. Labouchere
Vice-President, Earl Granville. The Archbishop of Canterbury, the Cabinet Ministers, and the Right Hon. C. Arbuthnot.
Secretaries, G. R. Porter, Esq., J. Booth, Esq.
Secretaries, Assistants, H. Hobart, Esq., J. P. Ward, Esq.
Private Secretary to the President, T. Baring, Esq.

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CANNON-ROW, WESTMINSTER.

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Secretaries, James Wilson, Esq., M.P., the Hon. John Elliot
Private Secretary, A. Hobhouse, Esq.
Solicitor, R. Groom, Esq.

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1 AND 2, SOMERSET-PLACE.

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President, the Right Hon. Mathew Talbot Baines.
Secretaries, George Nicholls, Esq., C.B., Lord Ebrington, M.P.
Assistant Secretaries, William Golden Lumley, Esq., Barrister-at-Law, and H. Fleming, Esq.
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Private Secretary to the President, Geo. Buller, Esq.
First Clerk, Mr. Francis Fletcher
Board Clerk and Accountant, Mr. Hugh Owen

ADMIRALTY,
WHITEHALL.

Lords Commissioners, Sir Francis Baring, Rear-Admiral Dundas, Capt. the Hon. F. Berkeley, Capt. Honston Stewart, the Hon. Wm. Cowper, Capt. Milne
Secretaries, John Parker, Esq., M.P., Capt. W. A. B. Hamilton, R.N.
Private Secretary, Capt. Charles Eden
Chief Clerk, J. H. Hay, Esq.
Hydrographer, Admiral Sir F. Beaufort
Assistant, M. Walker, Esq.

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Inspector-General, Sir W. Burnet
Director-General of Works, Col. Greene
Storekeeper, Hon. R. Dundas
Surveyor and Comptroller of Steam Department, Sir B. Walker
Assistant Surveyor, — Edye, Esq.
Chief Engineer, J. T. Lloyd, Esq.
Chief Clerks, J. M. Boddy, J. C. Parkin, W. Leyburn, B. Fosset, Wm. Scamp, Esqs.
Accountant, J. T. Briggs, Esq.
Deputy Accountant, O'B. Woolsey, Esq.
Victualling, J. Meek, Esq.

ROYAL OBSERVATORY,
GREENWICH.

Astronomer Royal, G. B. Airy, Esq., M.A. D.CL., F.R.S., P.R.A.S., &c.
First Assistant, Rev. R. Main, M.A., F.R.A.S.

ASTRONOMICAL DEPARTMENTS.

Circle Superintendent, J. Henry, Esq.
Transit Superintendent, T. Ellis, Esq
Altitude and Azimuth, E. Dunkin, Esq., F.R.A.S.

MAGNETICAL AND METEOROLOGICAL DEPARTMENT.

Superintendent, James Glaisher, Esq., F.R.S., F.R.A.S., Sec. of B.M.S.

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GREENWICH.

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Lieutenant-Governor, Rear-Admiral Sir James Alexander Gordon, K.C.B.
Captains, G. Moubray, T. Dickenson, T. L. P. Laugharne, W. Cuppage.
Commanders, C. Robinson, W. C. C. Dalyell, T. Colby, E. W. Garrett.
Lieutenants, F. Bedford, W. Rivers, M. Fitton, J. W. Rouse, D. O'Brien Casey, B. J. Loveless, J. Dornford, G. M. Monk.
Masters, T. Penrose, H. Smartley.
Chaplains, Rev. J. K. Goldney, Rev. E. Kitson
Medical Inspector of Hospitals, Sir John Liddell, M.D.
Deputy Medical Inspector of Hospitals, Alexander Nisbet, M.D.
Surgeon, James M'Ternan
Dispenser, J. Whitmarsh.
Assisting Dispenser, A. Yair.
Assistant Surgeons, N. Lyttelton, W. T. Domville, V. C. Clarke.

CIVIL DEPARTMENT.

Commissioners, the Earl of Granville (Paymaster-General), the Earl of Carlisle, R. Adm. Sir H. Hart, K.C.H., R. Adm. Sir W. O. Pell, G. Tierney, Esq.
Secretary, J. A. Lethbridge, Esq.

ROYAL HOSPITAL SCHOOLS,
GREENWICH.

Superintendent, Lieut. John W. Ronse
Chaplain, Rev. Geo. Fisher, M.A., F.R.S.
Head Master of the Nautical School, E. Riddle, Esq., F.R.A.S.
Head Master of Upper School, Rev. J. Hill.
Head Master of Lower School, E. Hughes, Esq.

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86, PALL MALL.

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Surveyor-General, Major-Gen. Fox.
Clerk, Col. Hon. G. Anson.
Storekeeper, Capt. Sir Thomas Hastings, R.N.
Secretary to the Master-General, Lord C. Paget.
Aide-de-Camp, Major H. W. Paget.

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WHITEHALL.

Paymaster-General, Earl Granville.
Assistant Paymaster-General, W. G. Anderson, Esq.
Chief Clerks, T. Morris, J. Perrior, and H. A. Hsrrison, Esqs.

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HORSE-GUARDS.

Commander-in-Chief, Duke of Wellington
Private Secretary, A. Greville, Esq.
Military Secretary, Lieut.-General Lord F. Somerset
Aides-de-Camp, Colonel Hon. C. Anson, Colonel Marquis of Douro, Capt. Earl of March, Captain Marquis of Worcester
Assistants to Military Secretary, F. H. Lindsay, Esq., F. Fergusson, Esq.

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HORSE-GUARDS.

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Assistant, Colonel J. Freeth
Deputy, Major Enoch
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Attorney-General, Sir J. Romilly.
Solicitor-General, Alex. J. E. Cockburn.

ADMIRALTY COURT,
2, PAUL'S BAKEHOUSE-COURT, DOCTORS'-COMMONS.

Judge, Rt. Hon. S. Lushington, D.CL.
Dean of the Arches, the Right Hon. Sir Herbert Jenner Fust.
Registrar, H. B. Swabey, Esq.
Queen's Advocate, Sir J. Dodson, LL.D.
Admiralty Adv., J. Phillimore, D.CL.
Queen's Proctor, F. H. Dyke, Esq.
Admiralty Proctor, W. Townsend, Esq.

JUDGE ADVOCATE-GENERAL'S OFFICE,
35, GREAT GEORGE-ST., WESTMINSTER.

Judge Advocate-General, the Right Hon. Sir David Dundas, M.P.
Deputy, Francis Newman Rogers, Esq., Q.C.
Chief Clerk, William Henry Hughes, Esq.
Second Clerk, Jonathan Scollick, Esq.
Third Clerk, Robert Champneys Mundell, Esq.

WAR OFFICE,
WHITEHALL.

Secretary at War, Rt. Hon. Fox Maule
Deputy, L. Sulivan, Esq.
Chief Examiner, R. C. Kirby, Esq.
First Clerk, J. Borrow, Esq.
Private Secretary, G. D. Ramsay, Esq.

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2, WHITEHALL-PLACE.

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RANGERS, KEEPERS, &c.

Windsor Great Park, Prince Albert.
Hyde Park, St. James's Park, Richmond Park, Greenwich Park, Hampton Court, Whittlebury Forest, Waltham Forest, Wychwood Forest, Dean Forest — His Grace the Duke of Wellington. H.R.H. the Duchess of Gloucester. The Earl of Aberdeen. Lady Bloomfield. Duke of Grafton Earl of Mornington. Lord Churchill. Lord Seymour.

QUEEN'S MINT,
LITTLE TOWER-HILL.

Master Worker, R. L. Sheil, Esq.
Deputy, Capt. Harness
Comptroller, W. H. Barton, Esq.
Chief Engraver, Wm. Wyon, Esq.
Assistant, Leonard Wyon, Esq.
Chief Medallist, B. Pistrucci, Esq.
Assayer, H. Bingley, Esq.

STATE PAPER OFFICE,
12, DUKE-STREET, WESTMINSTER.

Keeper, Right Hon. H. Hobhouse
Deputy, C. Lechmere, Esq.
Chief Clerk, R. Lemon, Esq.

PRIVY SEAL,
28, ABINODON-STREET, WESTMINSTER.

Lord Privy Seal, Earl of Minto
Private Secretary, Hon. C. J. B. Elliot
Chief Clerk, J. G. Donne, Esq.
(By Patent) R. Eden. Esq.
Keeper of Records, R. Eden, Esq.
Clerk, W. Goodwin, Esq.

SIGNET OFFICE,
28, ABINGDON-STREET.

Keepers of the Signet, the Secretaries of State.
Chief Clerks, Rev. W. H. E. Bentinck, C. S. Grey, Esq.
Deputy, H. D. Scott, Esq.
Keeper of the Records, H. W. Sanders, Esq.

TITHE COMMISSION,
9, SOMERSET PLACE.

W. Blamire, Esq., T. W. Buller, Esq., Rev. Richard Jones, M.A.

REGISTRAR OF DESIGNS OFFICE,
4, SOMERSET-PLACE.

Registrar, Clement Johnson, Esq.
Assistant Registrar, Hon. E. C. Curzon
Chief Clerk, J. Hill Bowen, Esq.

COLONIAL LAND AND EMIGRATION COMMISSIONERS,
9 AND 15, PARK-STREET, WESTMINSTER.

T. W. Clinton Murdoch, Esq., Charles Alex. Wood, Esq., Fredk. Rogers, Esq.
Secretary, S. Walcott, Esq.

CUSTOM HOUSE.

Chairman, Sir Thomas Fremantle.
Deputy, the Right Hon. G. R. Dawson.
Commissioners, H. Richmond, Esq., S. G. Lushington, Esq.,—T. P. Dickenson, Esq., F. Goulburn, Esq., C. C. Smith, Esq., Capt. Saurin, Hon. S. E. Spring Rice
Secretary, W. Maclean, Esq.
Assistant, — Gardner, Esq.
Receiver-General, Sir. F. Doyle
Comptroller-General, W. Dickinson, Esq
Solicitor, — Hammill, Esq
Surgeon, J. O. McWilliam, Esq., M.D.

INLAND REVENUE OFFICES.

EXCISE DEPARTMENT, BROAD-STREET, CITY; STAMP AND TAX DEPARTMENT, SOMERSET HOUSE.

Chairman, John Wood, Esq.
Deputy Chairman, J. Thornton, Esq.
Commissioners, Hsrt Davis, Charles Powlett Rushworth, Thomas Harrison, Henry Frederick Stephenson, Charles John Herries, Alfred Montgomery, Charles Pressly, Esqrs.
Secretary, J. C. Freeling, Esq.
Assistant Secretary, T. Keogh, Esq.
Solicitor, Joseph Timm, Esq.
Assistant Solicitor, Hugh Tilsley, Esq.
Receiver-General, W. T. Thornton, Esq.
Comptroller of Legacy Duties, Charles Trevor, Esq.

METROPOLIS ROADS,
22, WHITEHALL-PLACE.

Secretary, J. L. Panter, Esq.
Surveyor-General, Sir Jas. M'Adam.
Accountant, V. C. Wright, Esq.
Inspector, H. Browse, Esq.
Solicitor, J. W. Lyon, Esq.

OFFICE OF METROPOLITAN BUILDINGS,
6, ADELPHI-TERRACE.

Official Referees, W. Hosking, Esq., A. Poynter, Esq., J. Shaw, Esq.
Registrar, A. Symonds, Esq.
Examiners, Philip Hardwicke, Esq., J. Pennethorne, Esq., T. Cubitt, Esq.

GENERAL REGISTER OFFICE,
7 AND 8, SOMERSET-PLACE, SOMERSET HOUSE.

Reg.-General, George Graham, Esq.
Chief Clerk, Thomas Mann, Esq.

STATISTICAL DEPARTMENT.

Superintendent, William Farr, Esq.

RECORD DEPARTMENT.

First Clerk, Edward Edwards, Esq.
Assistant, William Owen, Esq.

CORRESPONDENCE DEPARTMENT.

First Clerk, George Sowray, Esq.

ACCOUNTANT'S DEPARTMENT.

First Clerk, Charles Henry Anderson, Esq.

RAILWAY BOARD,
BOARD OF TRADE, WHITEHALL.

Commissioners, the Right Hon. H. Labouchere (President), Earl Granville, Right Hon. Sir E. Ryan.
Secretary, Capt. Symons.

CITY OFFICERS.

LORD MAYOR.

Elected September 29th—Sworn in November 9th.
The Right Honourable JOHN MUSGROVE, Broad-street.

SHERIFFS.

Elected 24th June—Sworn in 28th September.
Robert Walter Carden, Esq., Alderman. | George E. Hodgkinson, Esq.

UNDER-SHERIFFS.

Henry Ellis, Esq. | H. S. Law, Esq.

ALDERMEN.

	When chosen Alderman.
THE FOLLOWING HAVE NOT PASSED THE CHAIR.	
Hunter, William, Esq., Coleman-street	1843
Challis, Thomas, Esq., Cripplegate	1843
Sidney, Thomas, Esq., M.P., Billingsgate	1844
Moon, F. G., Esq., Portsoken	1844
Salomons, David, Esq., Cordwainer	1848
Finnis, Thomas Quested, Esq., Tower	1848
Lawrence, William, Esq., Bread-street	1848
Carden, William, Esq., Dowgate	1849
THE FOLLOWING HAVE PASSED THE CHAIR.	
Hunter, Sir. C. S., Bart., Bridge Without	1804
Thompson, W., Esq., M.P., Cheap	1821
Key, Sir John, Bart., Langbourn	1823
Laurie, Sir Peter, Knt., Aldersgate	1826
Farebrother, C., Esq., Lime-street	1826
Copeland, W., Esq., M.P., Bishopsgate	1829
Kelly, T., Esq., Farringdon Within	1830
Wilson, Samuel, Esq., Castle Baynard	1831
Marshall, Sir C., Knt., Bridge Within	1832
Pirie, Sir John, Bart., Cornhill	1834
Humphery, J., Esq., M.P., Aldgate	1835
Magnay, Sir William, Bart., Vintry	1838
Gibbs, Michael, Esq., Walbrook	1838
Carroll, Sir George, Candlewick	1840
John K. Hooper, Esq., Queenhithe	1840
Sir James Duke, M.P., Farringdon Without	1840
Thomas Farncombe, Esq., Bassishaw	1841

EAST INDIA COMPANY.

Six Directors are elected annually in April, when six go ont by rotation. Each Director serves four years. The figure prefixed denotes the number of years each has to serve.

DIRECTORS.

(2) CHAIRMAN—John Shepherd, Esq., 5, Great Cumberland-place.
(3) DEPUTY CHAIRMAN—Sir James Weir Hogg, Bart., M.P., 16, Grosvenor-square.

(4) William Wigram, Esq.	(4) Martin Tucker Smith, Esq., M.P.
(3) Sir Robert Campbell, Bart.	(3) Lieut.-Col. William Henry Sykes.
(1) John Masterman, Esq., M.P.	(4) Elliot Macnaghten, Esq.
(4) John Petty Muspratt, Esq.	(2) Major James Oliphant
(2) Henry Alexander, Esq.	(3) John Clarmont Whiteman, Esq.
(4) Lieutenant-General Sir James Law Lushington, G.C.B.	(2) Hon. Wm. Henry Leslie Melville.
(4) George Lyall, Esq.	(1) Ross Donnelly Mangles, Esq., M.P.
(1) Russell Ellice, Esq,	(2) Major-General James Caulfeild, C.B.
(1) Sir Richard Jenkins, G.C.B.	(3) William Joseph Eastwick, Esq.
(1) William Butterworth Bayley, Esq.	(1) Major John Arthur Moore
(3) Sir Henry Willock, K.L.S.	(2) Henry Thoby Prinsep, Esq.

THE FOLLOWING GENTLEMEN ARE OUT BY ROTATION.

John Cotton, Esq.	W. H. Chicheley Plowden, Esq., M.P.
John Loch, Esq.	Henry Shank, Esq.
Charles Mills, Esq.	Henry St. George Tucker, Esq.

BANK OF ENGLAND.

GOVERNOR—H. J. Prescott, Esq.—DEPUTY GOVERNOR—T. Hankey, Jun., Esq.

DIRECTORS.

Henry Hulse Berens, Esq.	John Gellibrand Hubbard, Esq.
Arthur Edward Campbell, Esq.	Thomas Newman Hunt, Esq.
Edward Henry Chapman, Esq.	Charles Frederick Huth, Esq.
Robert Wigram Crawford, Esq.	Alfred Latham, Esq.
William Cotton, Esq.	James Malcolmson, Esq.
Bonamy Dobree, Esq.	James Morris, Esq.
Benjamin Buck Greene, Esq.	Sheffield Neave, Esq.
Charles Pascoe Grenfell, Esq.	George Warde Norman, Esq.
John Oliver Hanson, Esq.	John Horsley Palmer, Esq.
John Benjamin Heath, Esq.	Sir John Henry Pelly, Bart.
Kirkman Daniel Hodgson, Esq.	William Thompson, Esq., Alderman.
Henry Lancelot Holland, Esq.	Thomas Tooke, Junior, Esq.

LAW COURTS.

CHANCERY.—Lord High Chancellor, Lord Truro. Master of the Rolls, Lord Langdale. Vice-Chancellors: Sir James K. L. Bruce, Sir Robert M. Rolfe.
QUEEN'S BENCH.—Lord Chief Justice, Lord Campbell. Judges, Sir John Patteson, Sir John T. Coleridge, Sir Wm. Wigbtman, Sir Wm. Erle.
COMMON PLEAS.—Lord Chief Justice, Sir John Jervis. Judges, Sir Wm. Hen. Maule, Sir C. Cresswell, Sir Edw. Vaughan Williams, Sir Thos. N. Talfourd.
EXCHEQUER.—Lord Chief Baron, Sir Frederick Pollock. Barons, Sir James Park, Sir Edw. H. Alderson, Sir Thomas J. Platt, Sir Samuel Martin.

COURT OF BANKRUPTCY.

Loudon.—Joshua Evans, Esq., Robert George Cecil Fane, Esq., Henry John Shepherd, Esq., Edward Goulburn, D.C.L., Serjeant-at-Law, John Samuel Martin Fonblanque, Esq., Edward Holroyd, Esq.
Birmingham.—John Balguy, Q.C., Esq., and Edmund Robert Daniell, Esq.
Liverpool.—Ebenezer Ludlow, Esq., Sergeant, and H. J. Perry, Esq.
Manchester.—Walter Skirrow, Esq., and Wm. Thos. Jemmett, Esq.
Leeds.—Martin John West, Esq., and W. S. Ayrton, Esq.
Bristol.—H. J. Stephen, Esq. Serjeant, and Richard Stevenson, Esq.
Exeter.—Montague Baker Bere, Esq.,
Newcastle,—N. Ellison, Esq.

COMMERCIAL COMPANIES.

SOUTH SEA COMPANY, Threadneedle-street.—Governor, Charles Bosanquet, Esq.—Sub-Governor, C. Franks, Esq.—Dep.-Gov., Hon. P. P. Bouverie.—Officers: Cashier, J. T. Viner, Esq. Sec., C. F. Gibson. Esq. Accountant, W. R. Arnold, Esq. Chief Clerk in Transfer Office, John Jesse, Esq. Solicitor, Henry Wordsworth, Esq.

EASTLAND COMPANY, 25, Birchin-lane.—Governor, Stephen Thornton, Esq.—Dep.-Gov., J. Cattley, Esq.—Treasurer, Hon. J. T. L. Melville, Esq. Sec., Thomas Cope, Esq.

RUSSIA COMPANY, 25, Birchin-lane.—Gov., Thomas Tooke, Esq.—Consuls, John Thornton, Henry Cayley, Thos. Tooke, jun., S. E. Thornton, Esqrs.—Secretary, T. Cope, Esq.

HUDSON'S BAY COMPANY, Fenchurch-street.—Gov., Sir J. H. Pelly, Bart.—Dep.-Gov., Andrew Colvile, Esq.—Sec., Arch. Barclay, Esq.—Assistant Sec., Wm. Smith, Esq.

CANADA COMPANY.—Governor, Charles Franks, Esq.—Dep.-Governor, Jas. Mackillop, Esq.—Sec., John Perry, Esq.

LONDON DOCK COMPANY.—House, New Bank Buildings.—Chairman, J. Cattley, Esq.—Sec., J. D. Powles, Esq.

ST. KATHERINE'S DOCK COMPANY.—House, St Katherine's Docks.—Chairman, Thos. Tooke, Esq.—Sec., Sir J. Hall, K.C.H.

EAST AND WEST INDIA DOCK COMPANY.—House, No. 8, Billiter-square. Chairman, John Scott, Esq.—Dep. Chairman, E. M. Daniel, Esq.

COMMERCIAL DOCK COMPANY.—House, 106, Fenchurch-street.—Chairman, Nat. Gould, Esq.—Sec., H. K. Smithers, jun., Esq.

GRAND SURREY DOCK COMPANY.—Office, 2, White Lion-court, Cornhill.—Chairman, Josiah Wilson, Esq.—Dep. Chairman, William Curling, Esq. Sec., William M'Cannon, Esq.

BANKERS IN LONDON.

Agra and United Service, 15, Old Jewry Chambers.
Bank of Australasia, 8, Austin Friars.
——— British North America, 7, St. Helen's-place.
——— Ceylon, 72, Old Broad-street.
——— South Australia, 54, Old Broad-street.
Barclay, Bevan, Tritton, and Co., 54, Lombard-street.
Barnard, Barnard, and Dimsdale, 50, Cornhill.
Baruet, Hoares, and Co., 62, Lombard-street.
Bosanquet, Franks, and Whatman, 73, Lombard-street.
Bouverie, Norman, and Murdoch, 11, Haymarket.
British Colonial, 50, Moorgate-street.
Brown and Co., 25, Abchnrch-lane.
Brown, Janson, and Co., 32, Abchurch-lane.
Call (Sir W. P. Bart.), Marten, and Call, 25, Old Bond-street.
Child and Co., 1, Fleet-street.
Cockerell and Co., 8, Austin Friars.
Cocks, Biddulph, and Co., 43, Charing Cross.
Colonial Bank, 13, Bishopsgate Within.
Commercial Bank of London, Lothbury, and 6, Henrietta-street.
Coutts and Co., 59, Strand.
Cunliffes, Brooks, and Co., 24, Lombard-Street.
Cunliffe (Roger), 24, Bucklersbury.
Curries and Co., 29, Cornhill.
De Lisle, Janvrin, and Co., 16, Devonshire-square, Bishopsgate.
Denison, Heywood, Kennards, and Co., 4, Lombard-street.
Dixon, Brooks, and Dixon, 25, Chancery-lane.
Drewett and Fowler, Princess-street, Bank.
Drummonds, 49, Charing-cross.
East India Bank, 64, Moorgate-street
Feltham (John) and Co., 42, Lombard-street.
Finsbury Bank, 98, Goswell-road.
Fullers and Co., 66, Moorgate-street.
Glyn, Hallifax, Mills, and Co., 67, Lombard-street.
Goslings and Sharpe, 19, Fleet-street.
Hanburys, Taylor, and Lloyds, 60, Lombard-street.
Hankeys and Co., 7, Fenchurch-street.
Herries, Farquhar, Davidson, Chapman, and Co., 16, St. James's-street.
Hoares and Co., 37, Fleet-street.
Hopkinson, Barton, and Co., 3, Regeut-street, Waterloo-place.
Ionian Bank, 6, Great Winchester-street.
Ireland Agricultnral and Commercial, 14, St. Helen's Place.
Ireland, Nat. Bank of, 13, Old Broad-street.
Ireland, Prov. Bank of, 42, Old Broad-street.
Johnston (H. and L.) and Co., 15, Bush-lane.
Jones, Loyd, and Co., 43, Lothbury; London and Westminster Bank, Lothbury; St. James's-sqnare; 213, Holborn; 12, Wellington-street, Southwark; 87, High-street, Whitechapel; 155, Oxford-street.
London Joint Stock Bank, 5, Princes-st., Mansion House; and 60, Pall Mall.
London and County Joint Stock Banking Company, 71, Lombard-street.
London and Dublin Bank, 5, Old Broad-street.
Lubbock (Sir John, Bart.), Foster, and Co., 11, Mansion-house-street.
Martin, Stone, and Martins, 68, Lombard-street.
Masterman, Peters, Mildred, Masterman, and Co., 35, Nicholas-lane.
National Provincial Bank of England, 112, Bishopsgate-street Within.
Pocklington and Lacy, 60, West Smithfield.
Praed and Co., 189, Fleet-street.
Prescott, Grote, Cave, and Cave, 62, Threadneedle-street.
Price, Marryatt, and Co., King William-street, City.
Puget, Bainbridges, and Co., 12, St. Paul's Church-yard.
Ransom and Co., 1, Pall Mall East.
Robarts, Curtis, and Co., 15, Lombard-street.
Rogers, Olding, Sharpe, and Co., 29, Clement's-lane.
Royal Bank of Australia, 2, Moorgate-street.
Sapte, Muspratt, Banbury, and Co., 77, Lombard-street.
Scott (Sir Samuel,) Bart. and Co., 1, Cavendish-square.
Smith, Payne, and Smiths, 1, Lombard-street.
South Australian, 53, Old Broad-street.
Spooner, Attwoods, and Co., 27, Gracechurch-street.
Stevenson, Salt, and Sons, 20, Lombard-street.
Strahan, Paul, and Paul, 217, Strand.
Twining (Richard, George, John Aldred Richard) and Co., 215, Strand.
Union Bank of Australia, 38, Old Broad-street.
Union Bank of London, 2, Princes-street, City; 4, Pall Mall East; 4, Argyll-place, Regent-street.
Williams, Deacon, Labouchere, and Thornton, 20, Birchin-lane.
Willis, Percival, and Co., 76, Lombard-street.

CONSULATE AND PASSPORT OFFICES.

AUSTRIA.—Embassy, 7, Chandos-street, Cavendish-square, between 12 and 2.
BELGIUM.—Legation, 50, Portland-place, between 11 and 3; delivered next day between 11 and 2, gratis; at the Consul's office, 3, Copthall-court, between 10 and 4—fee 5s.
BAVARIA.—The Minister, 3, Hill-street, Berkeley-square, when personally known to him; or at the Consul's Office, 33½, Great St. Helen's.
BRAZIL.—Legation, 41, York-street, Portman-square, between 12 and 2, gratis.
DENMARK.—6, Warnford-court, between 10 and 4—fee 10s. 6d.; under special circumstances at the Embassy, 2, Wilton-terrace, Belgrave-square.
FRANCE.—French passport-office, 47, King William-street, City, from 12 till 4.

NAPLES AND SICILY.—Passport-office, 15, Princes-street, Caveudish-square, Mondays and Thnrsdays, between 10 and 12; delivered following day between 2 and 3, gratis.
PORTUGAL.—Embassy, 57, Upper Seymour-street, Portman-square, between 11 and 4, delivered following day; also at Consul's office, 5, Jeffrey's-square, St. Mary-axe, from 10 to 4.
PRUSSIA.—106, Fenchurch-street, between 10 and 6—fee 7s.
RUSSIA.—2, Winchester-buildings, between 10 and 4; delivered following day—fee 6s. 4d.

LITERARY AND SCIENTIFIC CORPORATIONS AND INSTITUTIONS.

Ælfric Society, 177, Piccadilly
Agricultural Society, Royal, 12, Hanover Square.
Antiquaries, Royal Society of, Somerset House.
Apothecaries, Society of, Union Street, Blackfriars.
Archæological Institute, 12, Haymarket.
Architects, Royal Institute of, 16, Grosvenor Street.
Art Union of London, 4, Trafalgar Sqre.
Arts, Manufactures, and Commerce, Society for Encouraging, Adelphi.
Asiatic Society, Royal, 5, New Burlington Street.
Astronomical Society, Somerset House.
Botanical Society, 20, Bedford Street.
British Institution, 52, Pall Mall.
British Meteorological Society, 13, Moorgate-street.
Cadogan Literary and Scientific Institution, Sloane Street.
Camden Society, 25, Parliament Street.
Church Buildiog Society, 4, St. Martin's Place.
City of London Literary and Scientific Institution, 165, Aldersgate Street.
Civil Engineers, Institution of, 25, Great George Street.
Eastern Literary and Scientific Institution, Commercial Road.
Entomological Society, 17, Old Bond Street.
Ethnological Society, 17, Saville Row.
Geographical Society, Royal, 3, Waterloo Place.
Geological Society, Somerset Place.
Harveian Society, 17, Edward Street, Portman Square.
Horticultural Society, 21, Regent Street.
Hunterian Society, 4, Bloomsbnry Street, Finsbury.
Law Society, Chancery Lane.
Linnæan Society, 32, Soho Sqnare.
Literary Fund Society, 73, Great Russell Street.
London Institntion, Finsbury Circus.
—— Library, 12, St. James's Square.
Marylebone Literary and Scientific Institution, 17, Edward Street, Portman-square.
Mathematical Society, 9, Devonshire Street, Bishopsgate.
Mechanics' Institution, 29, Southampton Buildings.
Medical Society of London, Royal, 3, Bolt Court, Fleet Street.
—— and Chirnrgical Society, Royal, 53, Berners Street.
Medico-Botanical Society of London, 32, Sackville Street.
National Society for Education of the Poor, Sanctuary, Westminster.
Numismatic Society, 41, Tavistock Street, Covent Garden.
Percy Society, 100, St. Martin's Lane.
Physicians, College of, Pall Mall East.
Royal Academy, Trafalgar Square.
—— of Music, 4, Tenterden Street, Hanover Square.
—— Botanic Society, Regent's Park.
—— Institution, 21, Albemarle Street.
—— Institution of British Architects, 16, Grosvenor Street.
—— Society, Somerset Honse.
—— Society of Literature, 4, St. Martin's Place.
Russell Institution, Coram St., Russell Sq.
Society for Protection of Agriculture, 17, Old Bond Street.
—— the Promotion of Christian Knowledge, 67, Lincoln's Inn Fields.
—— Propagation of the Gospel, 79, Pall Mall.
Society of British Artists, 64, Suffolk Street, Pall Mall.
Society of Painters in Water Colours, 5, Pall Mall East.
—— (New), 53, Pall Mall.
Statistical Society of London, 12, St. James's Square.
Surgeons, Royal College of, Lincoln's Inn Fields.
Veterinary College, Royal, College Street, Camden Town.
Westminster Literary Institntion, 6, Great Smith Street.
—— Medical Society, 32, Sackville Street.
Zoological Society of London, 11, Hanover Square.

PRINCIPAL PUBLIC AND PRIVATE EXHIBITIONS IN AND NEAR LONDON.

British Museum, Great Russell Street; open Monday, Wodnesday, Friday.
East India Company's Museum, Leadenhall Street; Monday, Thursday, Saturday, by ticket from a Director.
Society of Arts, Adelphi, open every day except Wednesday.
Museum of College of Snrgeons; Monday, Wednesday, Friday, from 12 till 4, by order of a Member. Tuesdays and Thursdays in May and June, by leaving name and address.
National Gallery of Pictures, Trafalgar Square; Monday, Tnesday, Wednesday, and Thursday, from 10 to 5.
Vernon Gallery of Pictures, Marlborough House, Pall Mall, Monday, Tucsday, Wednesday, Thursday, from 10 to 5.
St. Paul's Cathedral; from 9 till dusk, 2d.
Soane Museum, 13, Lincoln's Inn Fields; Thursday and Friday, during April, May, and June, from 10 to 4, name and address being left previously.
Dnlwich Picture Gallery, 5 miles S. of London, every day except Friday and Sunday, from 10 to 5 in Summer, and from 11 to 3 in Winter. Tickets gratis, at the principal Printsellers.
United Service Museum, Middle Scotland Yard; daily, with orders from members.
Museum of Economic Zoology, Craig's Court, Charing Cross.
Kew Botanic Gardens, 7 miles from London; every day except Sunday, from 1 to 6.
Entomological Society's Museum, 17, Old Bond Street; from 3 to 8.
Hampton Court Palace, 13 miles from London; daily, except Friday.
Windsor Castle; Tuesday, Thursday, and Saturday, from 11 to 4 o'clock from April to October; to 3 o'clock from October to April. Tickets from the principal Printsellers.
Woolwich Model and Rocket Rooms; daily, from 9 to 12 A.M., and 1 to 4 P.M.
Tower of London; daily, fee 6d., and extra 6d. for the Jewel Room.
The Monument, Fish Street Hill; daily, from 10 till dusk, admission 6d.
Thames Tunnel, Rotherhithe, 1d.
Zoological Gardens, Regent's Park; admittance 1s., with order from any member.
Surrey Zoological Gardens, Walworth; 1s.
Colosseum, Regent's Park; Panorama of London, 1s.; other parts, 1s.
Diorama, Regent's Park; 1s.
Panorama, Leicester Sqre., each View, 1s.
Royal Academy Paintings, at the National Gallery; open, May, June, and July, 1s.
Society of British Artists, Pall Mall; April to July, 1s.
Paintings in Water Colours, Pall Mall East; open in May, 1s.
British Institution, Pall Mall, select for Old Pictures; from April to July; for Modern Works, from August to October 1s.,
Polytechnic Institution, 309, Regent Street; daily, 1s.

TRANSFER OF STOCK, &c.

STOCK.	Transfer Days. Mo.	Tu.	We.	Th.	Fri.	Sat.	Hours of Transfer.	Div. Due. Jan.	Apl.	July	Oct.	Hours when payable.
At the Bank.												
Bank Stock, 7 per Cent		—	—	—	—		11 to 1	..	8 ..		13	9 to 3
Consolidated 3 per Cent.		—	—	—	—		11 .. 1	8 ..		8 ..		
3 per Cent. Reduced ..		—	—	—	—		11 .. 1	..	8 ..		13	9 .. 1
3½ per Cent. Ann. ..		—	—	—	—		11 .. 1	..	8 ..		13	
New 5 per Cent. Ann ..		—	—	—	—		11 .. 1	8 ..		8 ..		and
Long Ann. to Jan., 1860	—		—	—	—		11 .. 1	..	8 ..		13	
Do. 30 years, to Oct., 1859		—	—	—	—		11 .. 1	..	8 ..		13	1 .. 3
3 per Cent., 1726 ..		—	—	—	—		11 .. 1	8 ..		8 ..		
At South Sea House.												
3 per Cent. Old Ann. ..	—		—		—		12 .. 2	..	8 ..		13	
3 per Cent. New Ann. ..		—		—		—	12 .. 2	8 ..		8 ..		9 .. 2
3 per Cent., 1751		—		—		—	12 .. 2	8 ..		8 ..		
East India House.												
Stock, 10½ per Cent. ..						—	9 .. 2 / (Sat) 9 .. 12	6 ..		6 ..		9 .. 2 / Sat. 9 .. 12
Life Annuities, if transferred between Jan. 5 and April 4, or July 5 and Oct. 9								8 ..		8 ..		
——between April 5 and July 4, or Oct 10 and Jan. 4								..	8 ..		13	
Interest on India Bonds							March 31, Sept. 30					

Tickets for preparing the transfer of stock must be given in at each office before one o'clock. At the India House, before two.

Private transfers may be made at other times than as above, the books not being shut, by paying—At the Bank, India House, and South Sea House, 2s. 6d. extra for each transfer.

Transfers at the Bank and South Sea House must be made by half-past two o'clock. At the India House, by three.

Expense of Transfer } In Bank Stock, for £25 and under, £0 9s. Above that sum, £0 12s.
India Stock, for £10 „ £1 10s. „ „ £1 14s.
South Sea Stock, if under £100 9s. 6d. „ „ £0 12s.

Powers of attorney for the sale or transfer of stock to be left at the Bank, &c., for examination before two o'clock the day previous to being acted upon: if for receiving dividends, present them at the time the first dividend is payable.

The expense of a power of attorney is £1 1s. 6d. for each stock; but for Bank, India, and South Sea stocks, £1 11s. 6d. If wanted for the same day, half-past twelve o'clock is the latest time for receiving orders; but instructions should be given as early in the day as possible. The boxes for receiving powers of attorney for sale close at two.

Probates of wills and letters of administration, where stock stands in the deceased's name, must be left at the Will Office in the Bank of England from two to three clear days, exclusive of holidays, and a declaration of identity is usually required.

Stock cannot be added to any account (whether single or joint) in which the decease of the individual, or one or more of a joint party, has taken place; and the decease to be proved as soon as practicable. Powers of attorney in these cases become void.

The unaltered possession of £500 or upwards Bank Stock, for six months clear, will give the proprietor a vote.

The clear unaltered possession for a year of £1000 India Stock entitles the proprietor to one vote; of £3000, to two votes; of £6000, to three; of £10,000, to four votes.

LONDON FIRE ENGINE ESTABLISHMENT.

Superintendent, MR. JAMES BRAIDWOOD, 68, Watling-street.

LIST OF STATIONS.

Ratcliffe.—Wellclose-square. (Double Station.)
St. Mary Axe.—Jeffries-square.
Finsbury.—64, Whitecross-street, corner of Chiswell-street.
Cheapside.—67, 68, and 69, Watling-street. (Chief Station.)
Blackfriars.—27⅛, Farringdon-street. (Double Station.)
Holborn.—254, High Holborn.
St. Giles.—George-yard, Crown-street.
Covent Garden.—44, Chandos-street. (Double Station.)
Oxford-street.—76, Wells-street.
Golden-sqre.—39, King-st., Argyll-pl.
Portman-square.—33, King-street, corner of Baker-street.
Waterloo Bridge Road.—8, next to Zion Chapel.
Southwark Bridge Road.—2, near to Union-street.
Tooley-street.—147, Tooley-street.

Floating Engines.—Off King's-stairs, Rotherhithe, and Sonthwark Bridge.

The following are the Sations of the Extra Engines:—SHADWELL: 107, Broad-street, corner of Schoolhouse-lane. WESTMINSTER: Horseferry-road. ROTHERHITHE: Lucas-street, near the Police Station.

LONDON MARKET MEASURES.

These being often made either of osier or deal shavings, vary triflingly in size, more than measures made of less flexible materials.

Sea Kale Punnets: 8 in. diameter at top, 7½ in. at bottom, and 2 in. deep. *Radish Punnets:* 8 in. diameter, and 1 in. deep, if to hold six hands; or 9 in. by 1 in. for twelve hands. *Mushroom Punnets:* 7 in. by 1 in. *Salading Punnets:* 5 in. by 2 in.

Half Sieve contains 3½ imperial gallons; averages 12½ in. in diameter, and 6 in. in depth. *Sieve* contains 7 imperial gallons; diameter 15 in., depth 8 in. A sieve of peas is equal to 1 bushel; a sieve of currants, 20 qnarts. *Bushel Sieve:* 10½ imperial gallons; diameter at top, 17⅜ in.; at bottom, 17 in.; depth, 11½ in. *Bushel Basket*, when heaped, contains an imperial bnshel; diameter at bottom, 10 in.; at top, 14½ in.; depth, 17 in. Walnuts, nuts, apples, and potatoes are sold by this measure. A bushel of potatoes, cleaned, weighs 56 lb., but 4 lb. additional are allowed if not washed. A junk contains two-thirds of a bushel.

Pottle: A long tapering basket that holds rather over a pint and a half. A pottle of strawberries should hold half a gallon, bnt never holds more than one qnart; a pottle of mushrooms should weigh 1 lb. *Hand:* A bnnch of radishes, which contains from 12 to 30 or more, according to the season. *Bundle:* 6 to 20 heads of brocoli, celery, &c.; sea-kale, 12 to 18 heads; rhubarb, 20 to 30 stems, according to size; and asparagus, from 123 to 125. *Bunch:* Applied to herbs, &c., and varies much in size according to the season. A bunch of turnips is 20 to 25; of carrots, 36 to 40; of greens as many as can be tied together by the roots.

Grapes are put up in 9-lb. and 4-lb. punnets; new potatoes, by the London growers, in 2-lb. punnets. Apples and pears are pnt up in bnshels or half sieves. Weights always 16 oz. to the pound.

METROPOLITAN PUBLIC CARRIAGES, HACKNEY AND STAGE COACHES, &c.

Office, No. 3, Princes-street, Storey's Gate, Westminster.

Registrar, H. Wedgewood, Esq.

This Office was established in October, 1838, under the provisions of the Act of 1 and 2 Vict. cap. 79. Every carriage plying for hire within ten miles from the General Post-Office, and not being a stage carriage, is to be considered a "Hackney Carriage;" and every Stage Carriage (except such as every journey go beyond those limits) a "Metropolitan Stage Carriage." Every such carriage is to have the number, and the number of passengers licensed to carry, conspicuously placed inside and outside.

The Act requires all drivers, conductors, and watermen to be licensed; authorises the Registrar to grant licenses on payment of 5s., and requires such persons to wear badges. A magistrate may suspend for two months, and two magistrates may revoke the license. Driver or conductor, by misconduct occasioning damage on highways, being drunk during employment, or abusive, to forfeit not exceeding £3, or be committed for not exceeding two months; and magistrates may order compensation from proprietor to extent of £5. For obstructing road, improperly delaying on journey, or deceiving as to destination or route, or stopping on crossing, a fine not exceeding £1. The Act requires complaints to made within seven days from offence. The justices' decision is final. It is important to bear in mind that, if the complainant is the *only witness*, he must, *before his evidence is taken*, renounce his right to share of penalty, the whole of which thereupon goes to share of police of district; otherwise only half, the other going to the complainant. In all cases with costs. Actions under this statute are to be commenced within three months. The regulations to prevent extortion, which are in force as regards the fares for hackney carriages, apply to these stage carriages also. The regulations as to hackney carriages remain the same as prescribed by Act of 1 and 2 Will 4, cap. 22, by which the fares are governed. The general control, however, of these public carriages also, is now vested in the Registrar of the Metropolitan Public Carriages. Drivers are compellable to drive to any place within the prescribed limits; to wait, on deposit being made; to obtain hiror's consent before allowing other persons to ride; and to deposit within four days in the Office all property left in carriages. The regulations as to Hackney Carriage Fares are as follows:—

They are regulated by either distance or time: by distance, at the rate of 1s. per mile; by time, 2s per hour, with fractional proportions.

One-horse Carriages, whether Flys or Cabriolets, are entitled to two-thirds of the above sums respectively.

No single fare is less than 1s for Coaches, and 8d for Cabriolets. Every half mile beyond the first mile is 6d for Coaches, 4d for Cabriolets. Every fifteen minutes completed, and part of fifteen minutes beyond the first thirty minutes, 6d.

Back fare payable after eight in the evening, but not after five in the morning, where discharged beyond limits.

REGULATIONS RESPECTING STAGE CARRIAGES, INCLUDING OMNIBUSES.

No stage carriage is to carry passengers otherwise than upon proper seats, allowing sixteen inches in breadth for each passenger; children under five years of age, sitting in the lap, not to be reckoned. The number of passengers is to be painted conspicuously in the inside of every carriage, and on the back outside, under a penalty of £10 against the proprietor. No more than the proper number of passengers are to be carried, under a penalty of £5 each against the driver and conductor respectively. Any constable, peace-officer, or passenger, may measure the seats, under a penalty of £5 against any person refusing or obstructing such measurement. N.B. Rules are laid down respecting the number of outside passengers, limiting it according to the height and size of the carriage, independently of the limitation resulting from the length of the seats. See 5 and 6 Victoria, c. 79, ss. 13—17; and 6 and 7 Victoria, c. 86, adds that a printed Table of Fares shall be placed inside; imposes a penalty of £5 for acting as driver, conductor, &c., without a license; and £10 on the proprietor knowing or permitting such act; also a penalty of £3 for furious driving or wilful misbehaviour; £2 for causing obstructions by loitering, deceiving as to route, stopping at crossings, &c.

HACKNEY CARRIAGE STANDS IN THE METROPOLIS.

By virtue of the authority conferred upon the Commissioners of the Metropolitan Police by an act of last session, they have proceeded to make various alterations with respect to the old stands for hackney carriages, and to appoint others in different localities where the neighbourhood appeared to require such accommodation. Standings for hackney carriages have been appointed, which provide room for 1815 carriages. The chief objects kept in view have been to place them in the immediate neighbourhood where they are wanted, without causing obstruction by their being in the great leading thoroughfares. Regulations are made to prevent the drivers and others standing together on the footways, smoking, drinking, or by any improper behaviour causing obstruction or annoyance there.

The various stands, under this new regulation, are as follow:—

Whitehall Division.—Trafalgar-square, one on the east side and another on the west side; Whitehall.

Westminster Division.—Buckingham-gate; Cadogan-place; Carey-street, Westminster; Commercial-road, Pimlico; Franklin's-row, Chelsea College; Fulham-road; Grosvenor-street; Knightsbridge-green; Knightsbridge-road; Milbank; Milton-row, Vauxhall-bridge-road; Palace-yard, Shaftesbury-terrace, Vauxhall-bridge-road; Sloane-square.

St. James' Division.—Broad-street, Golden-square; Conduit-street, Regent-street; Davies-street, Berkeley-square; Dean-street, Soho; two in the Haymarket; Leicester-square; Park-lane, Piccadilly; three in Piccadilly; two in St. James'-street; Woodstock-street, Oxford-street.

Marylebone Division.—Adam-street west, Upper Berkeley-street; Boston-street, Park-road; Great Marylebone-street; Great Quebec-street, New-road; Harrow-road; London-street, Paddington; Maida-hill; Marylebone-lane, Oxford-street; Old Cavendish-street; Oxford-street; Paddington-street; Praed-street, Edgeware-road; three in the Uxbridge-road; Winchester-place, New-road.

Holborn Division.—Berners-street, Oxford-street; Bloomsbury-street, New Oxford-street; Bury-place, Bloomsbury; Castle-street East, Berners-street; Compton-street, Brunswick-square; Duke's-road, New-road; Foley-street, Portland-place; Goodge-street, Tottenham-court-road; Guildford-street, Foundling Hospital; John-street, Oxford-street; King's-road, Gray's-inn; two in the Portland-road; Southampton-row, Bloomsbury; three in Tottenham-court-road.

Covent-garden Division.—Agar-street, Strand; Bedford-street, Strand; Broad-street, St. Giles; Burleigh-street, Strand; Duncannon-street, Strand; two in Holborn; two in the Strand; Upper Wellington-street; Wellington-street, Strand.

Finsbury Division.—Clerkenwell-green; Cobham-row, Clerkenwell; Goswell-road; Goswell-street; Gray's-inn-road, King's-cross; Old-street, St. Luke's; St. John-street-road; two in Shoreditch.

Whitechapel Division.—Dock-street, Whitechapel; High-street, Whitechapel; Little Thames-street, St. Catherine; Tower-hill (east-side); Tower-hill (west side).

Stepney Division.—Epping-place, Mile-end-gate; High-street, Shadwell; St. George's-street, St. George's in the East; White Horse-street, Ratcliff.

Lambeth Division.—Blackfriars'-road; Kennington-cross; Kennington-green; Lambeth-road; Mount-street; New Bridge-street; Vauxhall; Palace New-road; St. George's Road; Waterloo-road.

Southwark Division.—Blackfriars-road; Borough-road East; Borough-road West; Dover-road; High-street, Southwark; Old Kent-road; Wellington-street, Southwark.

Islington Division.—Belinda-Terrace, Canonbury-square, Islington; Canonbury-place, Islington; City-road; Clapton-square, Hackney; Clark's-place, High-street, Islington; two in the Holloway-road; Islington-green; Kingsland-road; London-lane, Hackney; Penton-street, Pentonville; Pitfield-street (near the church), Hoxton; Richmond-road, Islington; Rotherfield, Islington; Great William-street, Maiden-lane, Islington.

Camberwell Division.—Camberwell-lane; High-street, Camberwell; Kennington Church; Manor-place, Walworth-road; Stockwell-place, Brixton.

Greenwich Division.—Blackheath-village; six in Greenwich; High-street, Woolwich.

Hampstead Division.—Charles-street, East, Hampstead-road; College-street, Camden-town; Cumberland-market (centre road); Edgware-road; Hampstead-road; High-street, Camden-town; North-street, Portman-market; Ordnance-road, St. John's-Wood; Park-road, St. John's Wood; Seymour-street, Euston-square; Wellington-road, St. John's Wood; Wilstead-street, Somers-town.

Kensington Division.—Broadway, Hammersmith; four in the Great Western-road, Kensington; Great Western-road, Hammersmith; Uxbridge-road, Nottinghill.

Wandsworth Division.—Great George-street, Richmond; Kew-road, Richmond; two in the King's-road, Chelsea; New-road, water side, Chelsea; Richmond green; Richmond-hill.

PORTERAGE.

The Rates of Porterage are regulated by Act of 39 Geo. 4, cap. 58.

For any parcel not weighing more than 50 lb, and when the distance does not exceed a quarter of a mile, 3d.; half a mile, 4d.; a mile, 6d.; a mile and a half, 8d.; two miles, 10d.; and 3d. for every additional half-mile. Porters exacting more, to be fined not exceeding 20s.; misbehaving, 20s to 10s. A ticket to be sent with every parcel; charge for carriage and porterage marked on it, under a penalty of 40s. or not less than 5s. Parcels are to be delivered at any place within half a mile of the carriage pavement in six hours after arrival, under a penalty of 20s. or not less than 10s. Parcels arriving between four in the evening and seven in the morning to be delivered in six hours from the latter period, under the like penalty. Informations under Act to be laid within fourteen days, with appeal to Quarter Sessions.

The business of the London and Metropolitan Parcels Conveyance Company, on the plan of the London local post, continues to be conducted with cheapness and punctuality, and to be successful and useful. Chief station, Rolls Buildings, Fetter-lane, and there are upwards of 700 receiving houses.

Carriers are not responsible for loss of parcel containing property where exceeding value of £10, unless same delivered as such and accordingly insured, for which insurance a receipt to be given. Any one coach proprietor or carrier may be sued. The Act does not relieve carrier, or proprietor, or mail contractor from liability for loss occasioned by servants' acts, or his own neglect or misconduct.

COMPARATIVE VALUE OF EUROPEAN COINS, WEIGHTS, AND MEASURES.

England.	France.	Prussia.	Austria.	Wurtemberg.	Baden.	Hanover.	Saxony.	Hesse.	Brunswick.	Oldenburg.	Mecklenburg.	Switzerland (Berne).
1 acre	0·405 hectare = 38,341 sq feet	1·584 morgen	0·703 jch.	1·283 morgen	1·124 morgen	1·555 morgen	1·467 morgen	1 618 morgen	1·617 morgen	2·841 juch n. m.	0 622 morg	1·177 juchart
1 foot = 12 inches	135·141 par. lines	11·653 zoll.	11·559 zoll.	1·064 foot	1·016 foot	1·043 foot	1·078 foot	1·219 foot	1·063 foot	1 031 foot	1·018 foot	1·016 foot
1 quarter	116·54 36 cub. par. lines	5 288 scb.	4·720 mtzn.	1 904 scb.	1·938 malter	1·555 maltor	2·34 sch.	2·271 malter	4 934 scb.	13·286 sch.	7·475 scb.	1·706 mutt.
1 bushel	1831·79 cub. par. lines	0 661 scb.	0·591 mtzn.	0·205 scb	0 242 malter	1·167 bimten	0 35 scb.	0 284 malter	1·167 hrmten	1·621 sch.	0 934 scb.	0·213 mutt.
1 gallon	228·97 cub par. inch	3·396 qt.	0·078 eimer	2·472 maass	3.028 maass	1·166 stubchn.	4·851 kannen	0·028 obm.	4·849 qt.	3·318 kannen	2 534 kannen	0·027 sanm.
1 lb. Avoirdupois	0·453 kl.	0·969 lb.	0 809 lb.	0 969 lb.	0·907 lb.	0·969 lb.	0·970 lb.	0 907 lb.	0·970 lb.	0·941 lb.	0 937 lb.	0·872 lb.
£1 sterling	25·33 francs	6 tblr. 25s. gr.	9fl 55 kr.	11 fl. 58 kr. (24fl. fuss.)	11 fl. 58 kr. 24fl fuss.	6 r. thaler 20 g. gr.	6r. thlr. 20 g. gr. 25 h. gr.	11 fl. 58 kr. 24 fl. fuss	6r. thlr. 20 g. gr.	6r. thlr. 5 gold g. gr.	6 r. thlr. 3 g. gr. gold	17 frcs. 7 batz.
1 shilling	1·26 13-20 fr.	10 s. gr. 3pf.	29 3-4 kr.	35 9-10 kr.	35 9-10 kr.	8g.gr. 2 2-5pf.	10bgr 2 1-2 pf	35 9-10 kr	8g.gr. 2 2.5d f	22 grot.	7g.gr. 4 1-5 pf	8 17-20 batz.
1 new French foot = 1-3 metre = 147·765 par. line	England. 1·096 feet.	1·062	1 0545	1·164	1·111	1·142	1·177	1.333	1·268	1·126	1·145	1·111

STAMPS AND TAXES.

AN ANALYSIS OF THE NEW STAMP DUTIES.

(*Comprising Act* 13 *&* 14 *Victoria, Cap.* 97. *Came into operation Oct.* 10, 1850.)

	£	s.	d.
AGREEMENT of any Minute or Memorandum of Agreement, where the matter thereof shall he of the value of £20 ..	0	2	6
Progressive duty	0	2	6
Where divers letters to prove an agreement .. .. (*No progressive*)	1	15	0
AFFIDAVIT not made for the purpose of being filed	0	2	6
ASSIGNMENT. *See* "Conveyance" or "Mortgage"			
ASSIGNMENT of Lease. *See* "Lease"			
In other cases	1	15	0
ATTESTED COPY, for every entire 720 words	0	1	0
AWARD	1	15	0
BARGAIN and SALE for vesting possession. (*Repealed*)			
BARGAIN and SALE. (*To be enrolled*) *See* "Conveyance" or "Mortgage"			
Upon any other occasion	5	0	0
BILL OF SALE—Absolute. *See* "Conveyance"			
BILL OF SALE—Conditional. *See* "Mortgage"			
BOND or MORTGAGE given as a security for any definite sum. (*See Table*)			
BOND or MORTGAGE given as a security for the repayment of any sum or sums to he thereafter lent, advanced, or paid, or which may become due, together with any sum already advanced or due, as the case may be:			
Where the money secured or to be recoverable thereupon shall be limited net to exceed a given sum .. — The same duty as on a Bond for such limited sum.			
And where the total amount of the money secured, or to he ultimately recoverahle thereupon shall he unlimited .. .. — The same duty as on a Bond for a sum equal to the amount of penalty of such Bond.			
And where there shall he no penalty in such last-mentioned case .. .. — The Bond shall be available only for such an amount as the *ad valorem* thereon will cover.			
BOND or MORTGAGE given as a security for the transfer of stock in the Funds, Bank of Ireland, East India, South Sea, or other company or corporation — The *ad valorem* for the average price of stock, &c., on the date of Bond.			
BOND as a collateral security on sale or mortgage where duty on principal deed does not exceed 20s. — Same *ad valorem* as on sale or mortgage.			
Exceeding 20s.	1	0	0
BOND as an additional or further security, previously secured by other security therein referred to, and paid the proper duty:—			
Where the sum shall not exceed £1400 .. — The same duty as on a Bond for like sum.			
And where the same shall exceed £1400	1	15	0
BOND or MORTGAGE transfer or assignment:—			
Where principal money shall not exceed in amount in the whole £1400 — The same duty as on a Bond for total amount.			
And in every other case	1	15	0
BOND as principal security for payment of any annuity, upon original sale thereof .. .. .. — The duty as on a conveyance.			
BOND given as security for the payment of any annuity (except upon the original sale thereof) at stated periods, for any certain term, so that the amount can be previously ascertained .. .. .. — The same *ad valorem* as on a Bond for such total amount.			
BOND ditto, for life or other indefinite period, so that the same cannot he previously ascertained:—			
Where annuity shall not exceed £50 per annum ..	1	0	0
£50 and not £100 per anuum	2	0	0
Exceeding £100 per annum, and also for every £100 and fractional part of £100 per annum	2	0	0
BOND of INDEMNITY	1	15	0
BOND for due execution of an office	1	15	0
BOND of any kind or description, given for any other purpose than as aforesaid .. .. .. — The duty chargeable thereon by any Act now in force.			
Provided always that no hond shall he charged with any greater amount of stamp duty than the *ad valorem* on the penalty of snch hond.			
COMPOSITION DEED	1	15	0
CONVEYANCE. (*See Table*)			
COPYHOLD. Admittance out of court, or memorandum thereof, or the copy of court roll of admittance in court ..	0	2	6
Progressive duty	0	2	6
COUNTERPART LEASE. *See* "Duplicate"			
COVENANT, Deed of:			
Where *ad valorem* charged on principal deed shall not exceed 10s — A duty equal to *ad valorem*.			
Exceeding 10s	0	10	0
DEED of any description, not otherwise charged or exempted	1	15	0
DEFEASANCE apparently absolute, hut intended only as a security. *See* "Mortgage"			
DUPLICATE or COUNTERPART of any deed or instrument of any description whatever, chargeahle with any stamp duty or duties, either under this schedule or any other Act or Acts now in force:			
Where such duty or duties chargeable as aforesaid (exclusive of progressive duty) shall not amount to 5s. — The same duty or duties as on original deed.			
And where the same shall amount to 5s. and upwards ..	0	5	0
Progressive duty in the latter case	0	2	6
In latter case duplicate requires a denoting stamp.			
FEOFFMENT. *See* "Conveyance or "Mortgage."			
FURTHER CHARGE. *See* "Mortgage."			
LEASE subject to yearly rent only. (*See Table.*)			
LEASE granted in consideration of money hy way of premium, without rent, or with rent under £20 — The duty as on convoyance for the amount.			
LEASE by way of premium, and also at a yearly rent amounting to £20 or upwards .. .. — Both duties payable.			
LEASE of any kind, not otherwise charged	1	15	0
LEASE, Assignment of. Upon any other occasion than a sale or mortgage .. .. — A duty equal to duty with which a similar lease would have been chargeable under this Act.			
Provided where similar lease would he £1 15s., such assignment shall he	1	15	0
LETTER of LICENCE	1	15	0
LETTER of ATTORNEY for sale, transfer, acceptance, or receipt of stocks or funds	1	0	0
LETTER or POWER of ATTORNEY of any other kind ..	1	10	0
MEMORIAL to be registered pursuant to Act for registering deeds, and upon every skin upon which same is written	0	2	6
MEMORIAL of ANNUITY, and upon every skin	1	0	0
MORTGAGES. The duties are similar to Bonds. (*See Table*)			
MORTGAGE, Reconveyance:			
Where principal money shall not exceed £1400 .. — *Ad valorem* mortgage duty.			
And in any other case	1	15	0
RECOGNIZANCE as a security. *See* "Mortgage."			
RECOGNIZANCE as an indemnity	1	15	0
RELEASE. *See* "Conveyance" or "Mortgage."			
RELEASE, GENERAL	1	15	0
SETTLEMENT of MONEY or STOCK. (*See Table.*)			
Deeds chargeahle with *ad valorem* which relates to settlement of lands or property, shall be charged with a further duty, as if a separate deed, exclusive of progressive duty			
SURRENDER. *See* "Conveyance" or "Mortgage."			
TRANSFER. *See* "Conveyance" or "Mortgage."			
WARRANT of ATTORNEY .. .. .. — The duties are similar to Bonds.			
Except where same shall be already secured, and proper duty paid exceeding 5s., and also where given for a sum exceeding £200 by a person in actual custody	0	5	0
WARRANT of ATTORNEY, not otherwise charged	1	15	0
PROGRESSIVE DUTY on ORIGINAL DEEDS:			
For every deed, together with any receipt or other matter pnt or indorsed thereon or annexed thereto, which shall contain 2160 words or upwards, then for every entire quantity of 1080 over and above the first 1080 words a progressive duty, viz.:—			
Where such deed shall he chargeable with any *ad valorem* duty not exceeding 10s., a progressive duty equal in amount to such *ad valorem* duty or duties			
And in every other case (except where any other progressive duty is expressly charged) a progressive duty of	0	10	0
PROGRESSIVE DUTY on DUPLICATES. *See* "Duplicate."			

TABLE OF AD VALOREM DUTIES.

LEASES

Commence at not exceeding £5, and increase 6d. for every £5 and fractional part of £5 up to £25; then increase 2s. 6d. for every £25 and fractional part of £25 up to £100; and then increase 5s. for every £50 and fractional part of £50 and upwards.

If yearly rent shall not exceed	£	s.	d.
5 ..	0	0	6
10 ..	0	1	0
15 ..	0	1	6
20 ..	0	2	0
25 ..	0	2	6
50 ..	0	5	0
75 ..	0	7	6
100 ..	0	10	0
150 ..	0	15	0
200 ..	1	0	0
250 ..	1	5	0
300 ..	1	10	0
350 ..	1	15	0
400 ..	2	0	0
450 ..	2	5	0
500 ..	2	10	0
550 ..	2	15	0
600 ..	3	0	0
650 ..	3	5	0
700 ..	3	10	0
750 ..	3	15	0
800 ..	4	0	0
850 ..	4	5	0
900 ..	4	10	0
950 ..	4	15	0
1000 ..	5	0	0
1050 ..	5	5	0
1100 ..	5	10	0
1150 ..	5	15	0
1200 ..	6	0	0
1250 ..	6	5	0
1300 ..	6	10	0
1350 ..	6	15	0
1400 ..	7	0	0
1450 ..	7	5	0
1500 ..	7	10	0

Example — Multiply by 2, cut off the last two figures, and divide by 4.

MORTGAGES, BONDS, and WARRANTS of ATTORNEY

Commence at not exceeding £50, and increase 1s. 3d. for every £50 and fractional part of £50 up to £300; then increase 2s. 6d. for every £100 and fractional part of £100 upwards.

If sum secured does not exceed	£	s.	d.
50 ..	0	1	3
100 ..	0	2	6
150 ..	0	3	9
200 ..	0	5	0
250 ..	0	6	3
300 ..	0	7	6
400 ..	0	10	0
500 ..	0	12	6
600 ..	0	15	0
700 ..	0	17	6
800 ..	1	0	0
900 ..	1	2	6
1000 ..	1	5	0
1100 ..	1	7	6
1200 ..	1	10	0
1300 ..	1	12	6
1400 ..	1	15	0
1500 ..	1	17	6
1600 ..	2	0	0
1700 ..	2	2	6
1800 ..	2	5	0
1900 ..	2	7	6
2000 ..	2	10	0
2100 ..	2	12	6
2200 ..	2	15	0
2300 ..	2	17	6
2400 ..	3	0	0
2500 ..	3	2	6
2600 ..	3	5	0
2700 ..	3	7	6
2800 ..	3	10	0
2900 ..	3	12	6
3000 ..	3	15	0
3100 ..	3	17	6
3200 ..	4	0	0
3300 ..	4	2	6

Example—Cut off the last two figures, and divide by 8.

CONVEYANCES

Commence at not exceeding £25, and increase 2s. 6d. for every £25 and fractional part of £25 up to £300; then increase 5s. for every £50 and fractional part of £50 up to £600; and then increase 10s. for every £100 and fractional part of £100 upwards.

If purchase-money does not exceed	£	s.	d.
25 ..	0	2	6
50 ..	0	5	0
75 ..	0	7	6
100 ..	0	10	0
125 ..	0	12	6
150 ..	0	15	0
175 ..	0	17	6
200 ..	1	0	0
225 ..	1	2	6
250 ..	1	5	0
275 ..	1	7	6
300 ..	1	10	0
350 ..	1	15	0
400 ..	2	0	0
450 ..	2	5	0
500 ..	2	10	0
550 ..	2	15	0
600 ..	3	0	0
700 ..	3	10	0
800 ..	4	0	0
900 ..	4	10	0
1000 ..	5	0	0
1100 ..	5	10	0
1200 ..	6	0	0
1300 ..	6	10	0
1400 ..	7	0	0
1500 ..	7	10	0
1600 ..	8	0	0
1700 ..	8	10	0
1800 ..	9	0	0
1900 ..	9	10	0
2000 ..	10	0	0
2100 ..	10	10	0
2200 ..	11	0	0
2300 ..	11	10	0
2400 ..	12	0	0

Example—Cut off the last two figures, and divide by 2.

SETTLEMENTS

Commence at not exceeding £100, and increase 5s. for every £100 and fractional part of £100 upwards.

If sum settled does not exceed	£	s.	d.
100 ..	0	5	0
200 ..	0	10	0
300 ..	0	15	0
400 ..	1	0	0
500 ..	1	5	0
600 ..	1	10	0
700 ..	1	15	0
800 ..	2	0	0
900 ..	2	5	0
1000 ..	2	10	0
1100 ..	2	15	0
1200 ..	3	0	0
1300 ..	3	5	0
1400 ..	3	10	0
1500 ..	3	15	0
1600 ..	4	0	0
1700 ..	4	5	0
1800 ..	4	10	0
1900 ..	4	15	0
2000 ..	5	0	0
2100 ..	5	5	0
2200 ..	5	10	0
2300 ..	5	15	0
2400 ..	6	0	0
2500 ..	6	5	0
2600 ..	6	10	0
2700 ..	6	15	0
2800 ..	7	0	0
2900 ..	7	5	0
3000 ..	7	10	0
3100 ..	7	15	0
3200 ..	8	0	0
3300 ..	8	5	0
3400 ..	8	10	0
3500 ..	8	15	0
3600 ..	9	0	0

Example—Cut off the last two figures, and divide by 4.

BILLS AND RECEIPT STAMPS.

INLAND BILLS AND PROMISSORY NOTES.

		Not exceeding 2 months. s. d.	Exc. 2 mo. s. d.
If	£2 0	£5 5	1 0	1 6
Above	5 5	20	1 6	2 0
and not exceeding	20	30	2 0	2 6
	30	50	2 6	3 6
	50	100	3 6	4 6
	100	200	4 6	5 0
	200	300	5 0	6 0
	300	500	6 0	8 6
	500	1000	8 6	12 6
	1000	2000	12 6	15 0
	2000	3000	15 0	25 0
3000 and upwards			25 0	30 0

RECEIPTS.

	s.	d.
If £5 and under £10	0	3
10 „ 20	0	6
20 „ 50	1	0
50 „ 100	1	6
100 „ 200	2	6
200 „ 300 . ..	4	0
300 „ 500	5	0
500 „ 1000	7	6
1000 or upwards	10	0
Receipts in full	10	0

BILLS OF EXCHANGE.

FOREIGN.

	s.	d.
Not exceeding £100	1	6
Above £100 & not exc. 200	3	0
„ 200 „ 500	4	0
„ 500 „ 1000	5	0
„ 1000 „ 2000	7	6
„ 2000 „ 3000	10	0
„ 3000	15	0

PROTESTS.

BILL OR NOTE.

	s.	d.
Less than .. .. £20 ..	2	0
£20 and under £100 ..	3	0
100 and under 500 ..	5	0
500 or upwards	10	0
Of any other kind	5	0
Bills of Lading	0	6
Charterparty	5	0

DUTIES ON LEGACIES, &c.

Of the value of £20, or upwards.

To children or their descendants, or lineal ancestors of the deceased	£1	0	0	Uncle or aunt, or their descendants	£5	0	0
Brother or sister, or their descendants	3	0	0	Grand-uncle or aunt, or their descendants	6	0	0
				All other relations, or strangers	10	0	0

The husband or wife of the deceased not chargeable with duty.

APPRENTICES' INDENTURES.

Premium not amounting to £30	£1	0	£400 & not amounting to £500	£25	0
£30 and not amounting to £50	2	0	500 „ „ 600	30	0
50 „ „ 100	3	0	600 „ „ 800	40	0
100 „ „ 200	6	0	800 „ „ 1000	50	0
200 „ „ 300	12	0	1000 or upwards	60	0
300 „ „ 400	20	0	Duplicate	0	5

LICENSES.

For Marriage, if special	£5 0
Ditto, if not special	0 10
For Bankers	30 0
For Pawnbrokers, within the limits of the twopenny post ..	15 0
Elsewhere	7 10
For Appraisers	2 0
For Hawkers and Pedlars, on foot	4 0
Ditto, with one horse, ass, or mule	8 0
Stage Carriage License, for every carriage	3 3
Hackney Carriage License, for every carriage	5 0
Selling Beer, to be drunk on the Premises .. .	3 3
Ditto, not to be drunk on the Premises	1 1

WINDOW TAX.

Windows.	Duty per Annum.	Windows.	Duty per Annum.	Windows.	Duty per Annum.	Windows.	Duty per Annum.
	£ s. d.		£ s. d.		£ s. d.		£ s. d.
8	0 16 6	16	3 18 6	24	7 5 9	32	10 13 3
9	1 1 0	17	4 7 0	25	7 14 3	33	11 1 6
10	1 8 0	18	4 15 2	26	8 2 9	34	11 10 0
11	1 16 3	19	5 3 9	27	8 11 0	35	11 18 3
12	2 4 9	20	5 12 3	28	8 19 6	36	12 6 9
13	2 13 3	21	6 0 6	29	9 8 3	37	12 15 3
14	3 1 9	22	6 9 0	30	9 16 3	38	13 3 6
15	3 10 0	23	6 17 6	31	10 4 9	39	13 12 0

Farm-houses belonging to Farms under £200 a year are exempt.

*** By cap. 17, 3 and 4 Vict., an additional £10 per cent. is imposed upon all the Assessed Taxes, Customs, and Excise.

HORSE TAX.

FOR RIDING, OR DRAWING CARRIAGES.

No.	Each Horse.	No.	Each Horse.	No.	Each Horse.	No.	Each Horse.
	£ s. d.		£ s. d.		£ s. d.		£ s. d.
1	1 8 9	6	2 18 0	11	3 3 6	16	3 3 9
2	2 7 3	7	2 19 9	12	3 3 6	17	3 4 0
3	2 12 3	8	2 19 9	13	3 3 9	18	3 4 6
4	2 15 0	9	3 0 9	14	3 3 9	19	3 5 0
5	2 15 9	10	3 3 6	15	3 3 9	20	3 6 0

Horses let to hire with post duty, each	£1 8 9
Race Horses, each	3 10 0
Horses rode by butchers in their trade, each	1 8 9
Where two only are kept, the second at	0 10 6
Horses for ridlng, and not exceeding thirteen hands, each ..	1 1 0
One horse used by a bailiff on a farm	1 5 0
Other horses, thirteen hands high, and mules, each	0 10 6

A horse used for riding by any one occnpying a farm of less annual value than £500, is exempt, provlded not more than one is kept; as are also horses employed by market-gardeners in their business.

DUTIES ON CARRIAGES.

WITH FOUR WHEELS.

No.	Per carriage for private use £ s. d.	No.	Per carriage for private use. £ s. d.	No.	Stage-coaches and post-chaises £ s. d.	No.	Stage-coaches and post-chaises £ s. d.
1	6 0 0	5	7 17 6	1	5 5 0	5	26 5 0
2	6 10 0	6	8 4 0	2	10 10 0	6	31 10 0
3	7 0 0	7	8 10 0	3	15 15 0	7	36 15 0
4	7 10 0	8	8 16 0	4	21 0 0	8	42 0 0

WITH TWO WHEELS.

	£	s.	d.
Carriages with two wheels, each	3	5	0
Ditto, drawn by two or more horses, or mules	4	10	0
For every additional body used on the same carriage ..	1	11	6
For every additional body	3	3	0
Carriages let by coachmakers, without horses	6	0	0

For every carriage with four wheels, being of less diameter than thirty inches each, where drawn by ponies or mules, above twelve and not exceeding thirteen hands, per annum, £3 5s.; if with less than four wheels, and the ponies not exceeding twelve hands, and not let for hire, exempt. For every carriage with four wheels, drawn by one horse and no more, per annum, £4 10s. Carriages with less than four wheels, drawn by one horse, and constructed and marked as described by Act 6 & 7 Wm. IV. c. 65, and I Vict. c. 61, not exceeding £21 in value; also common stage carts, constructed for the carriage of goods, and occasionally used for riding, are exempt.

DOGS.

For every greyhound	£1 0 0
For every hound, pointer, setting dog, spaniel, terrier, or lurcher, and for every dog, where two or more are kept, of whatever denomination they may be (except greyhounds)	0 14 0
For every other dog, where one only is kept	0 8 0
Compounding a pack of hounds	36 0 0

Farmers with farms under £100 value, and shepherds, are exempt for dogs kept for the care of sheep.

PENALTIES UNDER THE STAMP ACT.

For acting as an *Appraiser* without a license, £50.

For writing an *Appraisement* upon paper not duly stamped, £50.

Apprentices' Indentures to state the real amount of premium, in proportion to which the stamp duty is charged, on penalty of forfeiting double the amount of premium.

For *Attorneys* and *Solicitors* acting without having been admitted, £100.—For acting without certificate, £50.

For drawing a *Bill* or *Promissory Note* upon unstamped paper, or upon paper insufficiently or wrongly stamped, £50.—For post-dating *Bills of Exchange*, £100.

For drawing a *Cheque* more than 15 miles from the place where made payable, £100.—For receiving the same in payment, £20.—For Bankers paying the same, £100.

For setting out wrong amount of consideration money in *Conveyance*.—On the Attorney, £500; on the Purchaser and Seller, £50, and five times the amount of the excess of duty, payable on the full consideration money which ought to have been set forth; and the Purchaser may recover back so much of the consideration money as shall not be stated.

For selling *Plate* without license, £20: gold, above 2 dwts.; silver, 5 dwts.

For selling *Patent Medicines*, &c., without a license, £20. Without a stamp, £10.

For printing a *Newspaper* without first making declaration as to the ownership, &c., £50 for every day such paper shall be printed or published.—For printing without stamps, on each paper issued, £20.

For *Pawnbrokers* taking pledges without a license, £50. For selling *Plate* without a license, £20. For selling plate without being duly stamped, £50.

For taking possession of the effects of any one deceased without taking out *Letters of Administration*, £100.

For giving an unstamped receipt for money amounting to £5 and upwards, £10.

For giving a receipt on an insufficient stamp, £10.

For refusing to give a receipt when demanded for money paid, and amounting to £5, £10.

For selling playing cards without an Ace of Spades duly stamped, £10. For being in possession of unstamped playing cards, £5 per pack.

Vendors of Stamps may purchase an Allowance Ticket, but must not repurchase a Stamp.

DIRECTIONS FOR MAKING A WILL.

SPECIFIED TO BE USED SINCE DECEMBER, 1837.

The Will must be signed at the foot or end of it by the Testator, or by some other person in his presence, and by his direction.

The signature must be made or acknowledged by the Testator in the presence of *two* or more witnesses present at the same time.

The witnesses must attest and subscribe the Will in the presence of the Testator.

It will then be sufficient for the passing of real or personal property, or both.

Note. The whole of the above ceremonies will be required whether the Will contain the most trifling gift, or disposes of property of the first magnitude.

And note further. A gift to an attesting witness or to the wife or husband of an attesting witness is void; therefore, neither a legatee nor the wife nor husband of a legatee should be made an attesting witness to a Will.

No particular form of attestation is necessary, but the following may be used, If used, it must be copied and written at the end of the Will below the signature of the testator.—

"Signed by the said , the Testator, in the presence of us, present at the same time, who in his presence have subscribed our names as Witnesses."

The Testator should appoint one or more Executors.

If, after the execution of the Will, any alteration be made in it, by obliteration, interlineation, or otherwise, care must be taken that such alteration be executed in like manner as the Will itself. And it will be desirable also that the names of the Testator and witnesses be written on the margin of the Will, opposite every such obliteration, interlineation, or other alteration.

Wills may at any time be revoked; but wills made by single persons or widowers are absolutely void on their marriages after the date of the Wills, but such Wills may be re-executed by new delivery with two attesting witnesses, or by a Codicil similarly executed, expressive of the Testator's wish to carry into effect the provisions of the original Will.

N.B. No person who is under twenty-one can make a Will.

DOMESTIC RECIPES.

Cold Cup.—Two quarts of old ale, four glasses of brandy, four glasses of noyeau, sugar to taste, and one lemon cut in slices, and stuck on a piece of dry toast with cloves.

Sponge Cake.—Beat the yolks of seven eggs, and add gradually 1 lb. of powdered loaf-sugar, the whites of five eggs, ½ lb. of flour, and flavour it with lemon. Beat well until it is put in the oven.

Gingerbread.—1½ lb. of flour, 6 oz. of butter, 1 lb. of treacle, 1 lb. of coarse sugar, 1 oz. ground ginger, 1 oz. candied peel cut small. Mix the flour and butter well together, then add the other ingredients. It is better mixed the day before it is baked.

Paradise Pudding.—6 oz. of bread crumbs, 6 oz. of sugar, 6 oz. of currants, 6 apples grated, 6 oz. of butter beaten to a cream, 6 eggs, a little lemon-peel chopped, and nutmeg. Boil in a shape three hours. Serve with wine sauce.

Sago Pudding.—Boil a pint and a half of new milk with four spoonfuls of sago (washed), 4 eggs well beaten, lemon-peel, nutmeg, and sugar to the taste. A puff paste may be added. Bake slowly.

Arrowroot Pudding.—Two dessert spoons of arrowroot mixed smooth in a little cold milk, 1 egg, a little nutmeg, and lump sugar. Pour it into a cup, and boil three-quarters of an hour.

Lemon Pudding.—Mix two table-spoonfuls of flour with a little milk, and add to a pint of new milk when boiling; also, 2 oz. of butter. When cold, add five eggs well beaten, ½ lb. of lump sugar, the rind of a lemon grated, and the juice. Line the dish with paste, and bake in a slow oven about three-quarters of an hour.

Another Lemon Pudding.—The juice of one lemon and the rind grated, ¾ lb. of bread crumbs, ½ lb. of suet, 6 oz. sugar. Boil one hour and a half.

Tapioca Pudding.—Wash ½ lb. of large tapioca, and simmer it gently in a quart of milk until it is thick. When cold, add two eggs, some sugar, and a slice of butter. Bake, with a crust round the edge of the dish, in a moderate oven.

Vermicelli Pudding.—½ lb. of vermicelli creeded in a pint of new milk, cool with half a pint; add the yolks of four eggs, ½ lb. of butter, ½ lb. of sugar, a little brandy and nutmeg. Bake, with a crust round the dish.

Plum-Pudding without Eggs.—1 lb. of raisins, ¾ lb. of suet, 1 lb. of flour, 2 large table-spoonfuls of treacle, candied peel, and nutmeg, mixed with nearly a pint of milk. Boil five hours.

Baked Plum-Pudding.—Pour one pint of boiling milk over ½ lb. of bread, add ½ lb. of butter and ½ lb. sugar. When the bread is well soaked and the butter melted, beat it fine with a spoon; and, when cold, add five eggs, ½ lb. currants, one nutmeg, 2 oz. almonds, and 1 oz. of candied peel.

Buns.—1 lb. of flour, 1 oz. of butter, ½ oz. of lard, half a pint of milk, and a little yeast. This will make four buns.

Rice Cake.—1 lb. of ground rice, 1 lb. of butter, 1 lb. of sugar, twelve eggs, leaving out six whites, eight drops of essence of lemon.

Tea Cakes.—½ lb of flour, six oz. of sugar, ¼ lb. of butter, two eggs, leaving out one white.

Soda Cake.—¾ lb. of flour, ¼ lb. of butter, ¼ lb. of fine sugar. Rub the butter into the flour, mix with three eggs about a quarter of a pint of milk and half of a small teaspoonful of soda, candied peel, currants, or seeds *ad lib.* To be baked as soon as mixed.

Seed Biscuits.—¾ lb. of flour, ¼ lb. of sugar, 2 oz. of butter, two eggs, beaten up with a piece of ammonia and some caraway seeds.

Curd Cheesecakes.—To the curd from three quarts of new milk add ½ lb. of butter, and rub through a hair sieve, nine eggs, leaving out five whites, ¾ lb. of fine raw sugar, ¾ lb. of currants, candied peel, nutmeg, a wine-glass of brandy, four grated sponge biscuits, a quarter of a pint of cream. Mix all well together and send to the oven *directly*, having lined the patty-pans with puff paste.

Lemon Cheesecakes.—1 lb. of loaf sugar, six eggs, leaving out two whites, three finger-biscuits, 1½ oz. of ground rice, the juice of three lemons and rind of two, ¼ lb. of butter. Put these ingredients into a pan over a slow fire, stir it until the mixture is like honey, pour into jars, cover them with egg-paper, and it will keep for months.

Apple Cheesecakes.—½ lb. of white sugar, ¼ lb. of apples grated, ¼ lb. of butter, just melted, four eggs, leaving out two whites; the peel and juice of a lemon, a little nutmeg: the lemon juice must not be put in until the other ingredients are well mixed.

Mince-Meat.—1 lb. of suet chopped fine, 1 lb. of sugar, 1 lb. of currants, 1 lb. of raisins, the juice of four lemons, the peels to be boiled in three waters, and pounded; 2 oz. candied peel, a little brandy, port wine, and nutmeg.

Apple Jelly.—1½ lb. of lump sugar, 2 lb. of apples, pared and quartered, a small tea-cupful of cold water; put all into a pan, and let them simmer two hours; press them down, but do not stir them; lemon-peel may be pared and cut like straws: when ready, pour into moulds.

Damson Cheese.—Bake a quantity of damsons in an earthen jar, in a very slow oven, about an hour; then pulp them through a colander, and to every pound of pulp add five ounces of loaf sugar powdered: *boil briskly* three-quarters of an hour, and pour into moulds.

Raspberry Vinegar.—Infuse a quart of raspberries in a pint of vinegar forty-eight hours, frequently stirring them; then strain the liquor clear off, and to every pint add 1 lb. of loaf sugar. Boil it twenty minutes.

Walnut Ketchup.—Boil gently a gallon of the expressed juice of walnuts, strain it well, then put in it 2 lb. of anchovies, well washed from the salt; 2 lb. of shalots, 1 oz. cloves, 1 oz. mace, 2 oz. black peppercorns, and a clove of garlic. Let all boil together until the shalots sink. Let the liquor stand in a vessel until cold, then bottle it, dividing the spice to each; it will keep twenty years, but will not be fit to use the first twelve months.

A good Pickle for Tongues.—1 gallon of water, ½ lb. of bay salt, ½ lb. saltpetre, 1 lb. coarse sugar, with as much common salt as will make the brine float an egg. When it boils, skim it; and when cold, put in the tongues, having previously well washed and cleansed them with salt and water.

Pork Pie-Crust.—4 lb. of flour, ¾ lb. of lard, 2 oz. of butter, and a pint of water. Boil the above, and pour it on the flour boiling; stir it together, and then *well knead* it, and raise the crust for the pies.

Solid Syllabub.—1 pint of cream, ½ lb. of loaf-sugar powdered, 1 oz. of isinglass, boiled in half a pint of water till reduced to a quarter of a pint; a piece of lemon squeezed, and the rind grated; when the water is nearly cold, beat all up with a wisp; add a little brandy or white wine.

Blanc-Mange.—To a quart of new milk, or partly milk and cream, add 1 oz. of isinglass shavings, sugar to taste; flavour with laurel leaves, cinnamon, or lemon-peel. Boil it till the isinglass is dissolved; pour it through muslin into a pitcher; when settled, pour it into moulds. Wash the isinglass ere it is used, and rince the moulds with cold water or white of egg.

Lemon Jelly.—The juice of four large lemons, ½ lb. of fine sugar, the whites of three eggs, with a spoonful of water; set it over the fire, stirring it one way until the sugar is dissolved and the eggs rise to a scum; strain it through a jelly-bag into glasses.

Yellow Flummery.—Dissolve 1 oz. of isinglass in a quarter of a pint of water, then add half a pint of white wine, the yolks of four eggs, the juice and rind of one lemon; sugar to the taste. Boil a few minutes, and pour it into a shape.

Lemon Sponge.—Put an ounce of isinglass, with the rinds of two lemons cut very thin, into a pint of water, and dissolve over a clear fire; then add ½ lb. of sugar; strain it through a sieve, and stir it till cold; then put the juice of two lemons and a tablespoonful of brandy in, and let it remain till quite a jelly, then add the whites of two eggs, and beat it for an hour; put it in a mould.

College Pudding.—Beat 4 eggs, and put it to 4 oz. of bread crumbs, ½ lb. pounded lump sugar, 6 oz. of suet, 6 oz. of currants, a little brandy, lemon peel, and nutmeg; baked in cups.

Sultana Pudding.—½ lb. of raisins, ½ lb. of suet, a large tea-cup full of bread crumbs, 2 table-spoonsfull of flour, 2 ditto of sugar, two eggs, a little milk, ginger, nutmeg, and brandy to the taste; boil it five hours.

Buns or Tea-cakes, excellent.—1½ lb. of flour, ½ lb. of butter, one pint of milk, four eggs, 6 oz. of pounded lump sugar; rub the butter well into the flour, then mix the eggs, milk, and lemon peel with a table-spoonful of yeast; let it stand to rise; put in your sugar and currants; before baking it will require to be put in tins or cups.

A good Sauce to Wildfowl.—One glass of port wine, a table-spoonful of soy, ditto of catsup, ditto of lemon juice, a large shalot sliced, a slice of lemon peel, four grains of cayenne, one or two blades of mace, to be scalded and strained, and added to the gravy which comes from the bird.

Jack's Puddings.—2 oz. of butter, 2 oz. of flour, 2 oz. of sugar, 4 eggs, 1 pint of new milk; melt the butter in half the new milk, and stir it when nearly cold; add the flour, and bake them in cups.

GENERAL POSTAL REGULATIONS, &c.

RATES OF POSTAGE.—All letters from one part of Great Britian to another (including the Local Penny Posts and the London Twopenny Posts) are charged, if prepaid, and not

Exceeding half an ounce .. .. 1d.
Exceeding half an ounce, and not exceeding one ounce .. 2d.

and so on, at the rate of 2d. for every additional ounce or fraction of an ounce. Unpaid and unstamped letters are charged double postage on delivery.

HOURS OF POSTING FOR THE EVENING MAILS.—The Receiving-Houses close at 5.30 P.M.; but letters are received for the evening's dispatch until 6 P.M., if an extra penny stamp is affixed. The Branch Post-offices at Charing Cross, Old Cavendish-street, and Stones-end, Southwark, receive letters until 6 P.M., and until ½ to 7 P.M., by affixing an additional penny stamp. At the Branch Post-Office in Lombard-street, the box remains open without additional fee until 6 P.M., and until 7 P.M. by affixing a penny stamp. At the General Post-Office in St. Martin's-le-Grand until 6 free; and until 7, by payment of the extra charge as at Lombard-street. From 7 to half-past 7 P.M., letters may be posted at the General Post-Office upon payment of a fee of sixpence each, which must, as well as the postage, be pre-paid. Letters intended to pass by outward mails to foreign parts must be posted at the above hours.—N.B. Newspapers for the evening mails must be put into the Receiving-Houses before 5 P.M., the Branch offices before 5.30, or General Post-Office before 6 P.M. From 6 P.M. to 7.30, on payment of one-halfpenny late fee; except newspapers for foreign parts, which must be posted at the General Post-Office and Branch Offices before 6 P.M., and at the Receiving-Houses before 5 P.M.

MORNING MAILS are forwarded to most of the principal towns in England and Wales, and to all parts of Ireland and Scotland, for which the letter-boxes at the Receiving-Houses will be open till 7 A.M. for newspapers, and ½ to 8 A.M. for letters; and at the Branch Offices, Charing Cross, Old Cavendish-street, and the Borough, for newspapers until half-past 7 A.M., and for letters until 8 A.M. At the General Post-Office and the Branch Office in Lombard-street the boxes will close for newspapers at a quarter before 8 A.M., and for letters at half-past 8 A.M.

ANY SINGLE BOOK OR PAMPHLET can now be sent through the Post-Office to any part of the United Kingdom if not exceeding 16 oz. in weight, and open at both ends, by affixing six postage stamps; if above 16 oz. 1s., and 6d. for every additional pound or fraction of a pound. The Postmaster-General does not guarantee the delivery of books and pamphlets with the same accuracy and regularity as newspapers and letters, but in no case will the delivery be delayed more than 24 hours after the usual post.

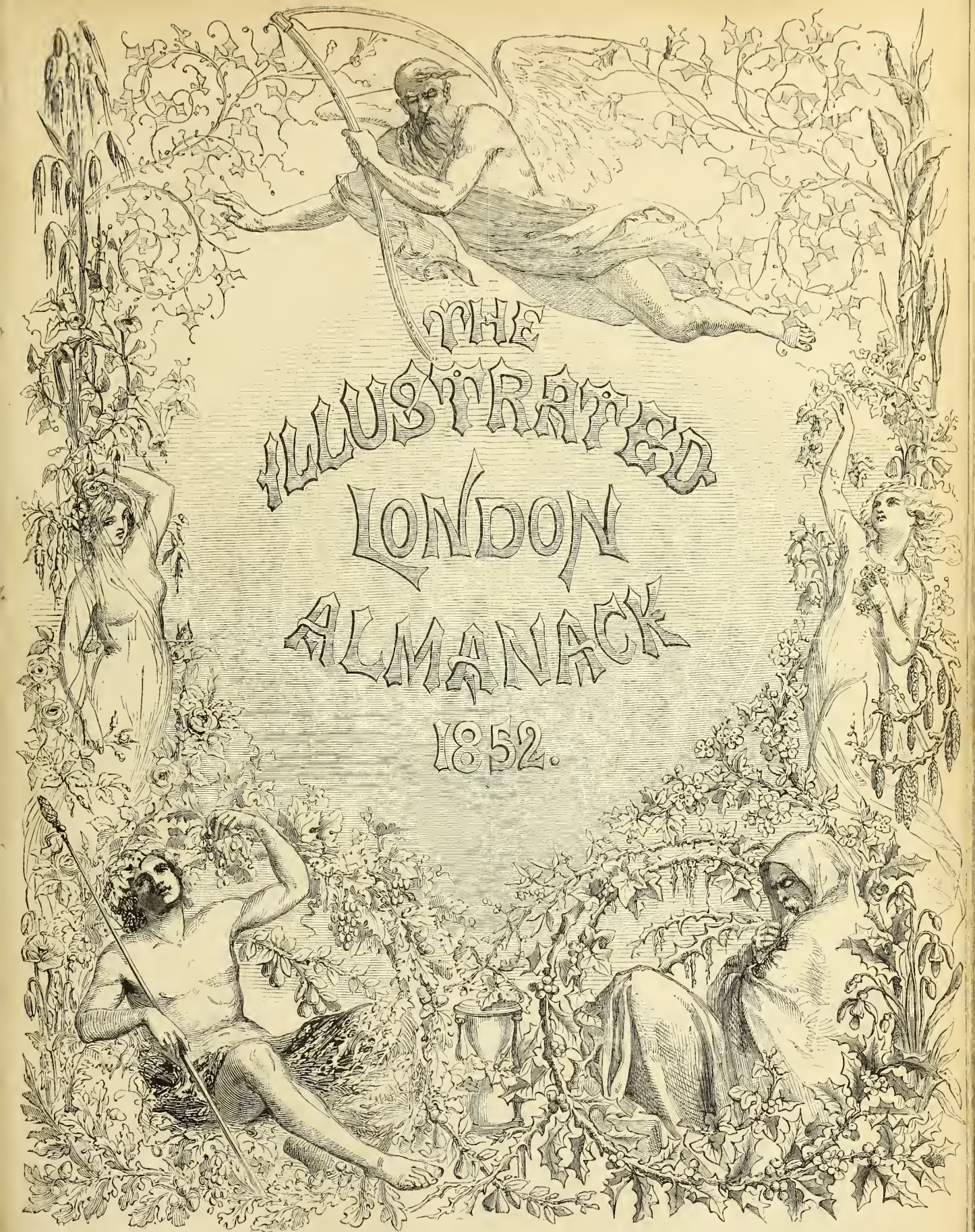
BRITISH AND COLONIAL PAPERS between British Colonies, without passing through the United Kingdom, to be free; except that 1d. may be allowed as a gratuity to the master of the vessel conveying them.

NEWSPAPERS, BRITISH, FOREIGN, OR COLONIAL, passing between British or Colonial or Foreign ports, and through the British Post, to pay 2d.; if not through the British post, 1d.

NEW POSTAGE STAMPS, intended principally for the pre-payment of foreign letters, have been issued. They are of the value of one shilling each, the colour being green, and the form octagonal, and another of the value of tenpence of a brown colour. These stamps may be used for inland as well as foreign postage, but they are chiefly intended for the postage of letters to the United States, India, China, the West Indies, New South Wales, and New Zealand, &c.

PACKAGES which in length, breadth, or width exceed twenty-four inches, cannot be forwarded by post between any places within the United Kingdom; except, however, petitions or addresses to her Majesty, or petitions to either House of Parliament forwarded to any Member of either House, or printed votes or proceedings of Parliament, or letters to or from any Government offices or departments.

MONEY ORDERS.—With a view to simplicity and economy in the accounts of the Money Order Office, it has been found necessary to lay down the following rules:—Every money order issued on or after the 6th October, 1848, must be presented for payment before the end of the second calendar month after that in which it was issued (for instance, if issued in October, it must be presented for payment before the end of December), otherwise a new order will be necessary, for which a second commission must be paid. 2. As already notified to the public, if an order be not presented for payment before the end of the twelfth calendar month after that in which it was issued (for instance, if issued in October and not presented before the end of the next October), the money will not be paid at all. 3. As, after once paying a money order, by whomsoever presented, the office will not be liable to any further claim, the public are strictly cautioned *a.* To take all means to prevent the loss of the money order. *b.* Never to send a money order in the same letter with the information required on payment thereof. *c.* To be careful, on taking out a money order, to state correctly the Christian name as well as the surname of the person in whose favour it is to be drawn. *d.* To see that the name, address, and occupation of the person taking out the money order are correctly known to the person in whose favour it is drawn. 4. Neglect of these instructions will lead to delay and trouble in obtaining payment, and even risk the loss of the money. These instructions, together with some others of minor importance, will be found printed on every money order.



LONDON: PUBLISHED AT THE OFFICE OF THE ILLUSTRATED LONDON NEWS,
198 AND 227 STRAND.

INTRODUCTION.

The Eighth Volume of the Illustrated Almanack is now issued to the Public. The favour with which the seven preceding have been uniformly received offers a guarantee for the favourable acceptance of the present Volume. The same unremitting desire to secure the accuracy of established facts, united with amusement and general instruction, has been the groundwork of the Illustrated Almanack for 1852, as it has been for the seven preceding years. The re-printing of information common to every year has again been avoided; and the same desire to destroy the ephemeral character of an Almanack has been evidenced by the peculiar nature of the Astronomical information contained in the pages to the right hand of the Calendar, and in the preceding pages,—information which qualifies the book for careful preservation at the end of the year, as one of a series containing a truthful record of Astronomical phenomena and occurrences. The Astronomical diagrams constitute a part of the same design, as, together with those already published, they form a permanent and interesting map of the heavens, intersected by the various paths pursued by the planets among the stars up to the present time. The stars on each diagram are laid down with care, so that each constitutes a Star Map, showing the true relative position of the large stars in that part of the heavens.

The publication of the Illustrated Almanack has been unavoidably delayed, chiefly from the increased demand which has this year been made upon the time and attention of James Glaisher, Esq., F.R.S., F.R.A.S., Secretary of the *British Meteorological Society*, who has again undertaken the scientific and astronomical information contained in the following pages.

In the Volume for 1851 some considerable space was allotted to statistical information, arising from the general importance now so justly attached to statistical knowledge. This year the plan has been somewhat varied, with a view to giving prominence to several notices of Astronomical discoveries, the most important amongst which are those relative to Saturn and his rings, which discoveries emanated from America, and have subsequently been confirmed by observation in our own country. The steadily increasing advance of optical knowledge leads us to expect a corresponding advance in Practical Astronomy, and to anticipate that discoveries in Astronomical Science will be less rare than formerly. The value of a cheap and largely-circulating medium for the embodiment of facts already elucidated, together with others as they successively arise, is evident; and their collection and publication in a work of such general circulation as an Almanack cannot fail to be attended with benefit in very many quarters,—of such benefit, indeed, as is invariably attendant upon the publication of useful and well-authenticated information.

Towards the conclusion of the Volume, and chiefly inserted with a view to the preservation of the illustrative character of the work, is a diagram showing the amount of day, night, and twilight of which the year is compounded. The nearly elliptic form which the duration of night throughout the year is found to assume is particularly interesting; the duration of daylight is forcibly and well shown; and the total absence of night, and consequent empire of day and twilight at one period of the year, are equally well depicted. Numbers placed at intervals on the bounding edges of the diagram give the times of sun-rising and sun-setting. The intervals between give the number of hours that the sun is above the horizon, and, from inference, the number of hours that he is below the horizon, on any day, and for every time of the year. The intention of this diagram is simply to give a selection of facts connected with the ordinary year in a new and popular form, without aiming at the addition of any new feature in connection with it. That part of the public which is more open to receive impressions from pictorial representation than from tabulated numbers, will receive both pleasure and conviction from this illustration of the duration of day and night, and their intermediate twilight. The longest day has been selected for the boundaries of the year illustrated in the diagram, for the purpose of preserving entire the all but elliptic form which the duration of night is found to assume. The most obvious arrangement, and that at first adopted for illustration, was the year in its natural order, by which the day and twilight portions would occupy the centre of the picture; but this order, involving the division of the period of night throughout the year into two parts, was found destructive to a great amount of the force of the illustration the diagram is destined to convey.

To trace the path pursued by the planets among the fixed stars throughout the year is difficult to the inexperienced observer. That to trace their path in the heavens, when laid down and pointed out by illustrations, would be productive of considerable addition to his astronomical knowledge; that to possess charts upon which the paths of the planets would be accurately and well laid down would establish an useful reference,—useful even to experienced observers,—and would also furnish a permanent record of the relative position of the heavenly bodies, and thus afford an important means of comparison with their position in years both past and present,—are all of them considerations which have decided Mr. Glaisher to give pre-eminence to this class of illustration in the present Volume, and have led him to be sparing of neither time nor labour in their accurate construction. The Calendarial portions have been likewise under the supervision of Mr. Glaisher. The illustrated column of the duration of moonlight throughout the year has been given as in former years, not so much with a view of preserving the uniformity of the series unbroken, as from a conviction of its suitability to the purpose intended, presenting as it does, at a glance, the relative disposition of dark and moonlight nights for each month throughout the year. Convinced as we are of the necessity of combining information in novel and pleasing forms, we are nevertheless anxious to preserve entire that system and form of illustration, which may now be said to have received the sanction of time. That this Volume may be found a not unworthy successor of those which have preceded it, that it may be found to have kept pace with modern improvement and advance, and that it may receive the sanction and full acceptance of the general public, is our most earnest wish, and not less the expectation of the Proprietors of the Illustrated London Almanack.

Of Eclipses there will be six during the year, three of which are Eclipses of the Sun, and three of the Moon. The order of their occurrence is as follows:—An eclipse of the Moon on January 6th; one of the Sun on January 21st; a second of the Sun on January 17th; a second of the Moon on July 1st; a third of the Sun on December 11th; and a third of the Moon on December 26th. Of these, one only is visible, that of the Moon on January 6th: its successive phases will be found on page 6.

CONTENTS.

ON THE CALENDAR.

PRINCIPAL ARTICLES OF THE CALENDAR FOR THE YEAR OF OUR LORD 1852.

	Gregorian, or New Calendar.	Julian, or Old Calendar.
Dominical Letter	D C	F E
Golden Number	10	10
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Solar Cycle	13	13
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CORRESPONDENCE OF THE YEAR 1852 WITH ANCIENT ERAS.

The year 1852, till September 13, is the latter part of the 5612th, and from September 14, is the first part of the 5613th year, since the creation of the world according to the Jews.

The year 1852 is the 6565th of the Julian Period.

The year 1852 is the 2605th year from the foundation of Rome (according to Varro).

The year 1852 is the 2599th year since the era of Nabonasser, which has been assigned to Wednesday, the 26th of February, of the 3967th year of the Julian Period, which corresponds, according to chronologists, to the 747th, and, according to astronomers, to the 740th year before the birth of Christ.

The year 1852 is the 2628th year of the Olympiads; or the 4th year of the 637th Olympiad will commence in July, 1852, if we fix the era of the Olympiads at 775½ years before Christ, or at or about the beginning of July of the year 3938 of the Julian Period.

The year 1852 is the latter part of the 1268th, and the first part of the 1269th year (of 12 lunations) since the Hegira, or flight of Mahomet, which it is generally supposed took place on the 18th of July, in the year 622 of the Christian era. The year 1268 commenced on the 27th of October, 1851, and ends October 15th, 1852.

CALENDAR OF THE JEWS FOR THE YEAR 1852.

5612.		1851.		NEW MOONS AND FEASTS.
Tebeth	1	December	24	Rosh Hodesh, or New Moon
		1852.		
,,	10	January	2	Fast: Siege of Jerusalem
Schebat	1	,,	22	New Moon
Adar	1	February	21	New Moon
,,	13	March	4	Fast: Esther
,,	14	,,	5	Purim
,,	15	,,	6	Schuschan Purim
Nisan	1	,,	21	New Moon
,,	15	April	4	Passover begins *
,,	16	,,	5	Second day *
,,	21	,,	10	Seventh day *
,,	22	,,	11	Passover ends *
Ijar	1	,,	20	New Moon
,,	18	May	7	Lag Beomer
Sivan	1	,,	19	New Moon
,,	6	,,	24	Pentecost Holidays: Feast of Weeks *
,,	7	,,	25	Second day *
Tamuz	1	June	18	New Moon
,,	17	July	4	Fast: Seizure of the Temple by Titus
Ab	1	,,	17	New Moon
,,	9	,,	25	Fast: Destruction of the Temple *
Elul	1	August	16	New Moon
	5613.			
Tisri	1	September	14	Feast of the New Year *
,,	2	,,	15	Second day of the Feast *
,,	3	,,	16	Fast: Death of Gedaliah
,,	10	,,	23	Fast: Day of Atonement *
,,	15	,,	28	Feast of Tabernacles *
,,	16	,,	29	Second day of the Feast *
,,	21	October	4	Feast of Branches
,,	22	,,	5	End of the Feast of Tabernacles *
,,	23	,,	6	Feast of the Law *
Marchesvan	1	,,	14	New Moon
Kislev	1	November	12	New Moon
,,	25	December	6	Feast of the Dedication of the Temple
Tebeth	1	,,	12	New Moon
,,	10	,,	21	Fast: Siege of Jerusalem
Schebat	1	1853. Jan.	10	New Moon

The Anniversaries marked with an asterisk (*) are to be strictly observed.

The Jewish Year generally contains 354 days, or 12 Lunations of the Moon; but in a cycle of 19 years an intercalary month (Veadar) is 7 times introduced, for the purpose of rendering the average duration of the year nearly correct.

MOHAMMEDAN CALENDAR FOR THE YEAR 1852.

Year.	Names of the Months.	Months begin.
Hegira; 1268.	Rebia I.	December 25, 1851.
,, ,,	Rebia II.	January 24, 1852.
,, ,,	Gomedhi I.	February 22, ,,
,, ,,	Gomedhi II.	March 23, ,,
,, ,,	Rejeb	April 21, ,,
,, ,,	Scheban	May 21, ,,
,, ,,	Ramedan (Month of Fasting)	June 19, ,,
,, ,,	Schewale (Bairam)	July 19, ,,
,, ,,	Dsu'l-Kâdah	August 17, ,,
,, ,,	Dsul'-hejjah	September 16, ,,
Hegira; 1269.	Moharrem I.	October 15, ,,
,, ,,	Safar I.	November 14, ,,
,, ,,	Rebia I.	December 13, ,,
,, ,,	Rebia II.	January 12, 1853.

(*For remarks on the Mohammedan year, see the Almanack for the year* 1848.)

BEGINNING OF THE SEASONS 1852.

			D.	H.	M.	
The Sun enters	Capricornus	(Winter begins) 1851, Dec.	22	9	29	A.M.
,,	Aries	(Spring begins) 1852, March	20	10	42	A.M.
,,	Cancer	(Summer begins) ,, June	21	7	29	A.M.
,,	Libra	(Autumn begins) ,, Sept.	22	9	41	P.M.
,,	Capricornus	(Winter begins) ,, Dec.	21	3	13	P.M.

FIXED AND MOVEABLE FESTIVALS, ANNIVERSARIES, &c.

Epiphany	Jan. 6	Birth of Queen Victoria	May 24
Martyrdom of King Charles I.	,, 30	Restoration of King Chas. II.	,, 29
Septuagesima Sunday	Feb. 8	*Pentecost—Whit Sunday*	,, 30
Quinquagesima—Shrove Sun.	,, 22	*Trinity Sunday*	June 6
Ash Wednesday	,, 25	*Corpus Christi*	,, 10
Quadragesima—1st Sunday in Lent	,, 29	Accession of Q. Victoria	,, 20
		Proclamation	,, 21
St. David	March 1	St. John Baptist—Midsummer Day	,, 24
St. Patrick	,, 17		
Annunciation—Lady Day	,, 25	St. Michael—Michaelmas Day	Sept. 29
Palm Sunday	April 4		
Good Friday	,, 9	Gunpowder Plot	Nov. 5
EASTER SUNDAY	,, 11	Birth of Prince of Wales	,, 9
Low Sunday	,, 18	*1st Sunday in Advent*	,, 28
St. George	,, 23	St. Andrew	,, 30
Rogation Sunday	May 16	St. Thomas	Dec. 21
Ascension Day—Holy Thursday	,, 20	Christmas Day	,, 25

DURATION OF THE SEASONS, AND THE YEAR 1852.

The Sun will be in the	Winter	signs	89	Days	1	Hour	13	Minutes
,,	Spring	,,	92	,,	20	,,	47	,,
,,	Summer	,,	93	,,	14	,,	12	,,
,,	Autumn	,,	89	,,	17	,,	32	,,

So that the period of Summer is 4 days, 12 hours, and 59 minutes, longer than that of Winter; 17 hours, 25 minutes longer than that of Spring; and 3 days, 20 hours, and 40 Minutes longer than that of Autumn.

	D.	H.	M.		°	′	″
The Sun will be on the Equator and going N. 1852, March	20	10	42	A.M., his dec. being	0	0	0
The Sun will reach his extreme N. declinat. 1852, June	21	7	29	A.M., his dec. being	23	27	32
The Sun will be on the Equator and going S 1852, Sept.	22	9	41	P.M., his dec. being	0	0	0
The Sun will be at his extreme S. declinat. 1852, Dec.	21	3	13	P.M., his dec. being	23	27	32

The Sun will be North of the Equator (Spring and Summer) 186 days 10 hours and 59 minutes.

The Sun will be South of the Equator (Winter and Autumn) 178 days 18 hours and 45 minutes.

The length of the Tropical Year, commencing at the Winter Solstice, 1851, and ending at the Winter Solstice, 1852, is 365 days 5 hours 44 minutes.

ASTRONOMICAL SYMBOLS AND ABBREVIATIONS.

☉ The Sun	⚵ Flora	W West
● New Moon	☿ Metis	° Degrees
☽ First Quarter of Moon	♁ Parthenope	′ Seconds of Arc
○ Full Moon	⚶ Victoria	″ Minutes of Arc
☾ Last Quarter of Moon	Egeria	D. Days
☿ Mercury	Irene	H. Hours
♀ Venus	♃ Jupiter	M. Minutes of Time
⊕ or ♁ The Earth	♄ Saturn	S. Seconds of Time
♂ Mars	♅ Uranus	☉ Sunday
⚶ Vesta	♆ Neptune	☽ Monday
⚵ Juno	☊ Ascending Node	♂ Tuesday
⚴ Pallas	☋ Descending Node	☿ Wednesday
⚳ Ceres	N North	♃ Thursday
⚲ Hebe	E East	♀ Friday
⚷ Iris	S South	♄ Saturday
⚸ Astrea		

The Symbol ☌ Conjunction, or having the same Longitude or Right Ascension.

,, □ Quadrature, or differing 90° in Longitude or Right Ascen.

,, ☍ Opposition, or differing 180° in Longitude or Right Ascen.

(*For explanation of Astronomical terms, see Almanack for the year* 1848.)

SIGNS OF THE ZODIAC.

Spring Signs	1 ♈ Aries	Autumn Signs	7 ♎ Libra
	2 ♉ Taurus		8 ♏ Scorpio
	3 ♊ Gemini		9 ♐ Sagittarius
Summer Signs	4 ♋ Cancer	Winter Signs	10 ♑ Capricornus
	5 ♌ Leo		11 ♒ Aquarius
	6 ♍ Virgo		12 ♓ Pisces

LAW TERMS.

As settled by Statutes 2 George IV. and 1 William IV., cap. 70 s. 6 (passed July 23rd, 1830,) and 1 William IV., cap. 3, s. 2 (passed Dec. 23rd, 1830.)

Hilary Term	Begins	January	11	Ends	January 31
Easter Term	,,	April	15	,,	May 8
Trinity Term	,,	May	22	,,	June 12
Michaelmas Term.	,,	Nov.	2	,,	Nov. 25

UNIVERSITY TERMS, 1852.

OXFORD.

TERM.	BEGINS.	ENDS.
Lent	January 14	April 3
Easter	April 21	June 29
Trinity	June 2	July 10
Michaelmas	October 11	December 17
	The Act, July 6.	

CAMBRIDGE.

TERM.	BEGINS.	DIVIDES.	ENDS.
Lent	Jan. 13	Feb. 22 Noon	April 2
Easter	April 21	May 30, Midnight	July 9
Michaelmas	Oct. 10	Nov. 12, Midnight	Dec. 16
	The Commencement, July 6.		

JANUARY, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises.	MOON. Souths. Aftern.	MOON. Height above horizon	MOON. Sets.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 6h. 8h. 10h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Th	*Circumcision*	8 8	3 37	15½	4 0	0 51	7 37	46½	1 21		10		8 50	9 25	1
2	F	Length of day 7h 53m	8 8	4 5	15½	4 1	1 10	8 22	50¾	2 37		11		9 55	10 28	2
3	S	Alpha Andromedæ souths 5h 11m P.M. at an alt. 66° 47′	8 8	4 33	15½	4 2	1 34	9 9	54¾	3 45		12		11 0	11 30	3
4	☽	2ND S.aft. CHRIST.	8 8	5 1	15¾	4 3	2 5	10 0	57¾	4 56		13		No Tide.	0 1	4
5	M	[Twelfth Day	8 8	5 28	15¾	4 3	2 43	10 54	59¾	6 6		14		0 25	0 49	5
6	Tu	*Epiphany.* O.C.D	8 7	5 55	16	4 4	3 32	11 51	60½	7 12		15		1 10	1 34	6
7	W	*Lucian.* F.In.due.	8 7	6 21	16	4 6	4 32	Morning.		8 12		●		1 55	2 18	7
8	Th	Aldebaran souths 9h 17m P.M. at an alt. of 54° 43′	8 7	6 47	16¼	4 7	5 42	0 50	59¾	9 1		17		2 40	3 1	8
9	F	Capella souths 9h 51m, at an altitude of 84° 22′	8 6	7 12	16¼	4 9	7 0	1 49	57½	9 43		18		3 20	3 42	9
10	S	Length of night 15h 56m	8 6	7 37	16½	4 10	8 21	2 45	53¾	10 15		19		4 5	4 25	10
11	☽	1ST S.af. EPH. Hil.	8 5	8 1	16½	4 11	9 43	3 40	49¾	10 43		20		4 50	5 10	11
12	M	Plough M. [T. b.	8 4	8 25	16¾	4 13	11 2	4 32	43¾	11 6		21		5 35	5 55	12
13	Tu	Hilary. O.N.Y.D.	8 3	8 48	17	4 14	Morning.	5 22	38¼	11 27		22		6 25	6 45	13
14	W	Ox. T.b. [Ca.T.b.	8 2	9 10	17	4 16	0 22	6 12	32¾	11 48		☾		7 15	7 40	14
15	Th	Jupiter in conjunction with the Moon at 8h 17m P.M.	8 2	9 32	17¼	4 18	1 43	7 3	27¼	Aftern.		24		8 15	8 45	15
16	F	Length of day 8h 18m	8 1	9 53	17½	4 19	3 0	7 54	22¾	0 38		25		9 25	10 0	16
17	S	[*can.* O.Tw.D.	8 0	10 14	17¾	4 21	4 16	8 47	19	1 10		26		10 35	11 15	17
18	☽	2ND S.af. EP. *Pris-*	7 59	10 34	17¾	4 22	5 28	9 41	16¾	1 49		27		11 48	No Tide.	18
19	M	Rigel souths at 9h 14m P.M. at an alt. of 30° 8′	7 58	10 53	18	4 24	6 34	10 36	15¼	2 37		28		0 19	0 50	19
20	Tu	*Fabian* Sun eclip., inv. at Greenwich	7 57	11 11	18¼	4 25	7 29	11 30	15½	3 33		29		1 16	1 40	20
21	W	*Agnes*	7 56	11 29	18½	4 27	8 14	Aftern.	16¾	4 37		○		2 6	2 30	21
22	Th	*Vincent*	7 55	11 46	18¾	4 29	8 49	1 13	19¾	5 42		1		2 49	3 10	22
23	F	Venus in conjunction with the Moon at 4h 23m P.M.	7 54	12 2	19	4 31	9 18	2 0	22½	6 50		2		3 28	3 45	23
24	S	Mars in opposition to the Sun at 6h 46m P.M.	7 53	12 17	19¼	4 33	9 43	2 45	26¼	7 58		3		4 3	4 20	24
25	☽	3RD S.af. EP. *Conv.*	7 51	12 32	19½	4 35	10 2	3 28	30¾	9 5		4		4 35	4 55	25
26	M	[*of St. Paul.*	7 50	12 45	19¾	4 37	10 18	4 9	35¼	10 10		5		5 10	5 30	26
27	Tu	Sirius souths at 10h 13m P.M. at an alt. of 12°	7 48	12 58	20	4 39	10 36	4 50	40	11 16		6		5 45	6 0	27
28	W	Procyon souths at 11h 2m P.M. at an alt. of 44° 7′	7 47	13 10	20¼	4 40	10 55	5 31	44½	Morning.		7		6 20	6 40	28
29	Th	Pollux souths at 11h 2m P.M. at an alt of 66° 54	7 46	13 22	20½	4 41	11 13	6 14	49½	0 21		☽		6 59	7 20	29
30	F	K. Chas. I. martyr.	7 45	13 32	20¾	4 43	11 35	6 59	53	1 28		9		7 40	8 9	30
31	S	Hilary Term ends	7 43	13 41	21	4 45	At Noon	7 47	56½	2 37		10		8 40	9 21	31

JANUARY.

THY captive locked and fettered, the sad Stream
Is mute beneath thy bondage, and her birds,
Hushing the songs more eloquent than words,
Have fled, or piteous watch the feeble beam
That plays along her prison bars. 'Twould seem
Thine is the victory, Winter! Branch and spray
Bear thy white banner, and the winds but play
Thy conquering music. Tyrant, dost thou deem
Thy reign eternal, or that level sun
So faintly smiling o'er thy waste of snow,
Defeated too? Thy day is well-nigh done,
And the warm heart of Earth, that throbs below,
Shall leap in gladness; all her streams shall run
In laughing light, and her young violets blow. B.

SPIRIT of storms and melancholy hours,
Stern January! must we front thy rage,
And at thy beck prepare our choicest flowers
To feed thy grave-yards, and thy wrath t' assuage?
Through driving snows and sleety rains we hear
His coming—spoiler of our homes! 'T is one
To him, the golden locks, or those the young revere—
Pauper or prince, so be the deed but done!
Seer-like, unmoved, and with an aspect drear,
In frosted garments stiffening through the night,
He views the pageant of the early bier,
Or cheerless mutters with the stars in sight!
Morn from her lattice strews dark blossoms now,*
Day comes in tears, and eve with troubled brow. K.

* The "rosemary" flowers in January, and is dedicated to "the dead."

JANUARY.

SUCCESSIVE APPEARANCES OF THE MOON DURING HER ECLIPSE ON JANUARY 7, 1852.

THE SUN is situated south of the Equator, or has south declination, and is in the sign Capricornus (the Goat) till the 20th, having been in that sign 29 days 10 hours 39 minutes. On this day, at 8h. 8m. P.M., he enters the sign Aquarius (the Water-bearer). On the 2nd day he is 93,405,400 miles from the Earth. He rises on the 1st at a point situated 3° south of the S.E. by E., and on the 16th, at the S.E. by E.; and sets, on the same days, at 3° south of the S.W. by W., and at the S.W. by W. points of the horizon. The time daily that he attains his highest point in the heavens, in common clock time, as also his altitude in degrees, are shown in the opposite pages.

On January 2nd there will be an eclipse of the Sun, but it is invisible in Europe.

The MOON is in the constellation Cetus till the 2nd, on which day she passes into Aries; on the 3rd she enters Taurus, passing through the constellation, until, on the 5th, she enters the Milky Way, passing from thence into Gemini on the same day; on the 7th she enters Cancer; on the 9th, Leo; and on the 11th, Virgo; she is traversing this constellation until the 15th, when she enters Libra; on the 16th, Serpentarius; on the 18th, Sagittarius, passing through the Milky Way; and on the 21st is in Capricornus; on the 23rd she enters Aquarius; on the 25th, Pisces; on the 26th, Cetus; on the 27th she skirts the constellation Pisces; and on the 28th enters Cetus; on the 29th, Aries; and on the 30th, Taurus.

She is above the horizon when the Sun is below, during the evening and night hours, till the 9th, again after the 24th; and during the morning hours, from the 13th.

She is situated about 8° north of the Equator on the 1st; is at her extreme north position at about midnight on the 16th; crosses the Equator, going south, on the morning of the 13th; is at her extreme south declination on the 19th; crosses the Equator, going northward, on the 27th; and is situated about 18° north of the Equator on the last day.

She is near Mars on the 8th; Jupiter on the 15th; Mercury on the 19th; Venus on the 23rd; Saturn on the 28th; and Uranus on the 28th.

Early in the morning of January the 7th will take place a total eclipse of the Moon, and is the only visible eclipse of either the Sun or Moon during the year, at this part of the earth. The eclipse commences at 21 minutes after 4 o'clock in the morning; at 21 minutes after 5 the Moon will be totally eclipsed; the middle of the eclipse is at 6 minutes after 6 o'clock; and at 1 minute to 8 o'clock the eclipse will be over. The successive appearances of the Moon, both before and after totality, are shown in the above diagrams.

MERCURY is in the constellation Sagittarius throughout the month.

He sets on the 1st at 5h. 2m., being 1h. and 2m. after sunset; on the 3rd, at 4h. 47m., being 45m. after sunset; on the 7th, he sets at about the same time as the Sun. He rises on the 13th at 6h. 48m.; on the 19th, at 6h. 26m. A.M.; on the 24th, at 6h. 22m. A.M.; and on the last day, at 6h. 26m. A.M. He is visible after sunset during the first few evenings of the month, and before sunrise from the 9th to the end of the month. The interval of time between the rising of the planet and that of the Sun increases from about 1h. on the 10th to 1h. 33m. on the 18th, decreasing to about 1½h. towards the end of the month. In the commencement of the month he sets at the S.W. by W. point of the horizon, and rises throughout at the S.E. by E. of the horizon. He is moving westward among the stars till the 16th, is stationary among them on the 17th, and moves eastward during the remainder of the month. He is in perihelion on the 1st; in inferior conjunction with the Sun on the 6th; is near the Moon on the 19th; and is at his greatest western elongation on the 29th. His path in the heavens, and his relative position to fixed stars, are shown in the diagram in next month. No large star is situated near him during the month.

VENUS is in the constellation Capricornus till the 19th, and in Aquarius till the end of the month; she is an evening star, and sets on the 1st at 5h. 51m.; on the 15th at 6h. 37m., and on the last day, at 7h. 25m.; near the S. W. by W. at the beginning; the W. S. W. about the middle; and near the W. by S. at the end of the month. She is moving eastward among the stars, and is near the Moon on the 23rd. Her path in the heavens during this month, and her relative position to the large stars near her, are shown in the diagram in March.

MARS is in the constellation Cancer throughout the month. He is visible throughout the night, and rises on the 1st at 6h. 18m. P.M.; on the 15th, at 4h. 56m. P.M.; and on the last day at 3h. 20m. P.M., near the N. E. by E. point of the horizon. He is moving westward among the stars, and is near the Moon on the 8th. His path in the heavens, and relative position to the large stars near him, are shown in the diagram in April.

JUPITER is in the constellation Libra throughout the month. He is a morning star, and rises on the 1st at 3h. 35m. A.M.; and on the last day at 2h. 3m. A.M., midway between the E. S. E. and the S. E. by E. points of the horizon. He moves very slowly eastward among the stars, and is near the Moon on the 15th. He souths at an altitude 22° on the 1st day, decreasing to 21½° on the last day. For his path among the stars, see the diagram in August.

JUPITER'S SATELLITES. Several emersions of the 1st, 2nd, and 3rd satellites are visible. The relative positions of the satellites to Jupiter at the instant of their eclipse is shown in the annexed diagram, as viewed through an inverting telescope.

1st Sat. 2nd Sat. 3rd Sat.

SATURN is in the constellation Cetus throughout the month. He sets on the 1st at 1h. 48m. A.M., and on the last day at 11h. 57m. P.M., near the W. by N. points of the horizon. He moves slowly eastward among the stars, and is near the Moon on the 28th. He souths at an altitude of 46¾° on the 15th. His path in the heavens is shown in the diagram in November.

URANUS is in the constellation Aries throughout the month. He souths on the 1st at an altitude of 49¾° at 7h. 12m. P.M., and sets at 2h. 13m. A.M. near the W. N. W. point of the horizon; and on the last day he souths at 5h. 15m. P.M., and sets at 19m. after 12h. He is near the Moon on the 28th. He is almost stationary among the stars.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Aftern.	Venus. Aftern.	Mars. Morning.	Jupiter. Morning.	Saturn. Aftern.	Uranus. Aftern.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	0 49	1 42	2 23	8 18	7 3	7 12
6	0 4	1 48	1 59	8 2	6 44	6 52
11	Morning	1 54	1 33	7 45	6 24	6 32
16	10 48	1 59	1 6	7 28	6 5	6 13
21	10 32	2 3	0 38	7 12	5 46	5 53
26	10 27	2 7	0 10	6 54	5 27	5 34
31	10	2 10	Aftern.	6 37	5 9	5 15

JUPITER'S SATELLITES.

Eclipses of 1st Satellite. Disappear.	Eclipses of 2nd Satellite. Disappear.
d. h. m.	d. h. m.
4 5 58 A.M.	12 3 26 A.M.
11 7 52 A.M.	19 5 59 A.M.
20 4 13 A.M.	3rd Sat. Disap. and Reap.
27 6 7 A.M.	19 4 30 A.M.
	19 6 31 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Name of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d h. m.		
Delta 1 Tauri	4	4 4 50 A.M.	Dark	68° N. to 4° S.
37 Leonis	6	10 6 44 A.M.	Bright	North of
		10 7 38 A.M.	Dark	9° N.

TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
FULL MOON ...	7	6	9	A.M.
LAST QUARTER	14	1	18	A.M.
NEW MOON ...	21	7	27	A.M.
FIRST QUARTER	29	10	34	A.M.
PERIGEE	10	10		P.M.
APOGEE	26	7		P.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN: ASTRONOMICAL TIME.

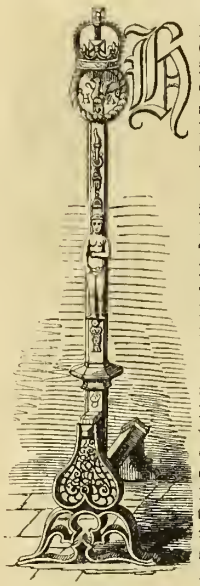
Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	19 30	110 25	20 24	111 0	9 2	69 1	14 59	105 55	1 46	81 48	1 54	78 50	22 28	100 27
6	19 0	109 43	20 49	109 29	8 57	68 27	15 3	106 9	1 46	81 46	1 55	78 50	22 2	100 23
11	18 36	109 49	21 15	107 44	8 50	67 52	15 6	106 21	1 46	81 42	1 55	78 50	22 28	100 20
16	18 28	110 21	21 38	105 16	8 43	67 16	15 9	106 32	1 46	81 38	1 54	78 49	22 28	100 17
21	18 34	111 4	22 3	103 38	8 35	66 42	15 11	106 43	1 47	81 33	1 54	78 48	22 30	100 14
26	18 51	111 39	22 27	111 21	8 28	66 10	15 14	106 52	1 48	81 27	1 55	78 47	22 30	100 10
31	19 13	111 56	22 50	98 56	8 20	65 44	15 16	107 0	1 49	81 20	1 55	78 45	22 31	100 6

MEMORABLE EVENTS AND PLACES, WITH NOTES.

By JOHN TIMBS, Esq.

JANUARY.

HEVER CASTLE, ANNE BOLEYN, AND ANNE OF CLEVES.

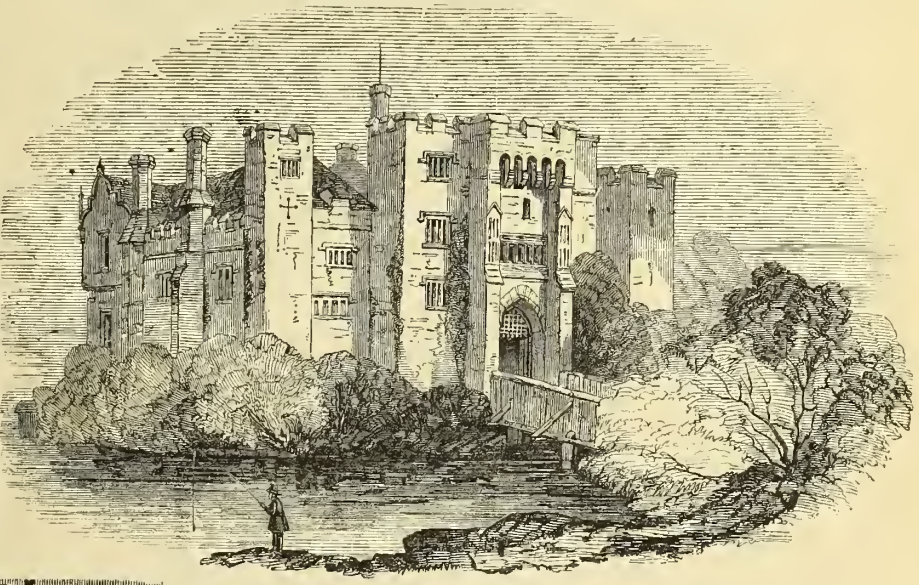


HEVER CASTLE will form an interesting starting point for the commencement of our Picturesque Calendarial Illustrations; for this domestic fortress is intimately associated with two of the unfortunate Queens of Henry VIII. At Hever, Anne Boleyn was secretly married to Henry, in January 1533; it was her family seat, as well as the property of Anne of Cleves, whom Henry married in January, 1540; and who died at Hever.

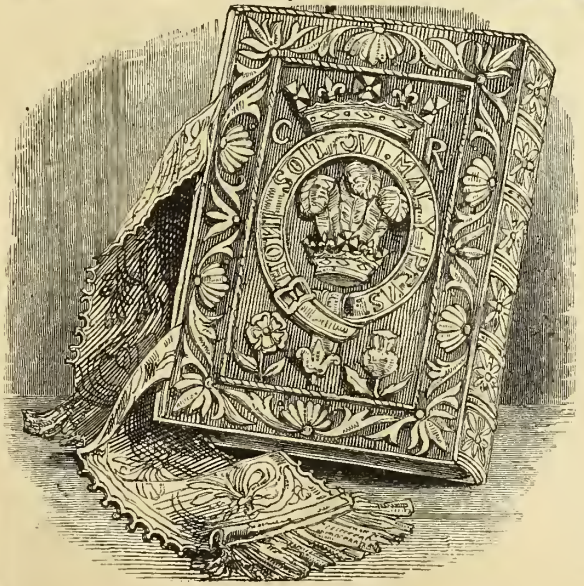
This curious specimen of the *domestic fortress* is situated on the eastern border of the county of Kent, about four miles north-west of Penshurst. The Castle was erected by William de Hever, a Norman baron, who, under Edward III., obtained the King's license to "embattle his manor-house." His two daughters and co-heiresses conveyed it in marriage to the families of Cobham and Brocas; the former, who had acquired the whole by purchase, afterwards sold the entire estate to Sir Geoffrey Boleyn, a wealthy mercer of London, Lord Mayor of that city in the thirty-seventh of Henry VI.; and great-grandfather to Anne Boleyn, the unfortunate Queen of Henry VIII., and mother of Queen Elizabeth. On the death of Sir Thomas Boleyn, K.G., Earl of Wiltshire and Ormond, and father of Anne, Henry seized this estate in right of his late wife; and afterwards enlarged it by purchases from others of her family; or as Miss Benger, the accomplished biographer of Anne Boleyn, states: "Henry, with matchless cupidity, claimed it in right of a wife, from whom, previous to her being beheaded, he had been divorced." The next possessor was the Lady Anne of Cleves; who, after her divorce, had settled on her this and other adjoining manors for life, or so long as she should remain in the kingdom, at the yearly rent of £93 13*s.* 3*d.* She made Hever Castle her general place of residence and died here in the fourth or fifth year of the reign of Philip and Mary; at which time these estates were sold, by Commissioners authorised by the Crown, to Sir Edward Waldegrave, Lord Chamberlain to the Queen's household, who, on the accession of Elizabeth, was divested of all his employments, and committed to the Tower, where he died, in 1561. From his family the manors passed to the Humphreys; and finally to the family of the Medleys, in Sussex.

The Castle next became the property of Miss Waldo; and for this lady it was refitted some years since as a residence. It is a large massive building, with buttresses, square towers, embrasures, square windows, and a watered moat, supplied by the Eden. The entrance gateway is flanked by two towers; it is embattled, strongly machicolated, and defended by a portcullis. The great staircase communicates with various oaken chambers; and the long gallery has a curiously-wrought ceiling in stucco. In the staircase windows is some old glass, charged with the arms and alliances of the Boleyns, &c. At the upper end of the gallery, part of the floor lifts up, and discovers a narrow gloomy descent, called the dungeon, leading as far as the moat.

Among the memorials at Hever is a pair of andirons, bearing the Royal initials, "H. A.:" one of these relics we have engraved in the prefixed letter. A small recess, or apartment, opening from the gallery at Hever, is said to have been occasionally used by Henry as a council-chamber.



HEVER CASTLE, KENT.



THE BIBLE USED BY CHARLES I.

EXECUTION OF CHARLES I., JANUARY 30TH, 1648.

EVERY memorial of this important event in our history is cherished with respect; but none possesses greater than that here engraved. "There is," says the author of *Collectanea Antiqua*, "so much external evidence of the genuineness of this very beautiful and interesting relique, that no doubt can exist as to its perfect authenticity; though the circumstance of the King having a Bible with him on the scaffold, and presenting it to Dr. Juxon, is not mentioned in any contemporaneous account of his death. The only notice of such a volume, as a dying gift, appears to be that recorded by Sir Thomas Herbert, in his narrative, which forms a part of the 'Memoirs of the Last Two Years of the Reign of that unparalleled Prince, of ever-blessed memory, King Charles I.;' London, 1702; 8vo, p. 129; in the following passage:—'The King thereupon gave him his hand to kiss, having the day before been graciously pleased, under his royal hand, to give him a certificate, that the said Mr. Herbert was not imposed upon him, but by his Majesty made choice of to attend him in his bedchamber, and had served him with faithfulness and loyal affection. His Majesty also delivered him his Bible, in the margin whereof he had, with his own hand, written many annotations and quotations, and charged him to give it to the Prince so soon as he returned.' It will be observed that the cover of the volume is decorated with the badge of the Prince of Wales within the Garter, surmounted by a Royal coronet in silver gilt, inclosed by an embroidered border: the initials C.P., apparently improperly altered from C. R, and the badges of the Rose and Thistle upon a ground of blue velvet; and the book was, therefore, bound between the death of Prince Henry, in 1612, and the accession of Charles to the throne, in 1625, when such a coronet would be no longer used by him.

FEBRUARY, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Aftern.	MOON. Height above horizon	MOON. Sets. Morning.	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	♑	4TH S. aft. EPIPH.	7 42	13 50	21¼	4 46	0 34	8 39	59	3 45	11	9 55	10 28	32
2	M	*Purif.* Cand. Day	7 41	13 58	21½	4 48	1 17	9 34	60¼	4 52	12	11 8	11 44	33
3	Tu	*Blaise*	7 39	14 5	21¾	4 50	2 13	10 33	60¼	5 54	13	No Tide.	0 18	34
4	W	Alpha Arietis souths at 5h 4m P.M. at an alt. of 61° 17′	7 37	14 11	22	4 52	3 20	11 32	58¾	6 49	14	0 45	1 12	35
5	Th	*Agatha*	7 35	14 17	22¼	4 54	4 36	Morning.		7 34	●	1 35	2 0	36
6	F	Length of day 9h 24m	7 34	14 21	22¾	4 55	5 57	0 31	55¼	8 12	16	2 25	2 45	37
7	S	Half-Quar. Day	7 32	14 25	23	4 57	7 21	1 28	51¼	8 43	17	3 10	3 30	38
8	♑	SEPTUAGESIMA S.	7 30	14 28	23½	4 59	8 45	2 23	46	9 10	18	3 50	4 10	39
9	M	Aldebaran souths at 7h 12m P.M. at an alt. of 54° 44′	7 29	14 30	23¾	5 1	10 8	3 4	41	9 32	19	4 35	5 0	40
10	Tu	Queen Vic. mar.	7 27	14 31	24	5 3	11 29	4 8	34¼	9 54	20	5 20	5 40	41
11	W	Day breaks 5h 29	7 25	14 32	24¼	5 4	Morning.	4 59	28½	10 17	21	6 5	6 25	42
12	Th	Twilight ends 7h 0m P.M.	7 23	14 32	24½	5 6	0 51	5 51	24	10 42	☾	6 50	7 15	43
13	F	Day increased 2h 4m	7 22	14 31	25	5 7	2 8	6 44	20	11 12	23	7 40	8 10	44
14	S	*St. Val.* O.C.D.	7 20	14 29	25¼	5 9	3 21	7 37	17	11 49	24	8 45	9 25	45
15	♑	SEXAGESIMA S.	7 18	14 27	25½	5 11	4 26	8 31	15½	Aftern.	25	10 5	10 45	46
16	M	Ceres stationary	7 16	14 24	26	5 13	5 25	9 25	15¼	1 26	26	11 30	No Tide.	47
17	Tu	Capella souths at 7h 20m P.M. at an alt. of 81° 22′	7 14	14 20	26¼	5 15	6 10	10 17	16	2 25	27	0 8	0 40	48
18	W	Rigel souths at 7h 15m P.M.	7 12	14 16	26¾	5 17	6 48	11 7	18¼	3 31	28	1 10	1 35	49
19	Th	Length of day 10h 11m	7 10	14 10	27	5 19	7 21	11 55	21¼	4 38	29	2 0	2 20	50
20	F	Sirius souths at 8h 39m P.M. at an altitude of 12°	7 8	14 5	27½	5 21	7 45	Aftern.	24¾	5 45	○	2 35	2 55	51
21	S	Length of night 13h 42m	7 6	13 58	27¾	5 23	8 5	1 24	29¼	6 52	1	3 10	3 25	52
22	♑	QUINQUAGESIMA,	7 4	13 51	28	5 25	8 25	2 6	33¾	8 0	2	3 45	4 0	53
23	M	[or SHR. S. C.T.d.	7 2	13 43	28½	5 27	8 41	2 47	38¼	9 4	3	4 15	4 30	54
24	Tu	*Shrove Tuesday*	7 0	13 35	28¾	5 29	8 59	3 28	43	10 9	4	4 45	5 0	55
25	W	*St. Mat. Ash W.*	6 57	13 26	29¼	5 30	9 17	4 9	47½	11 14	5	5 15	5 30	56
26	Th	Procyon souths at 9h 6m P.M. at an alt. of 41° 7′	6 55	13 16	29½	5 32	9 39	4 53	57¾	Morning.	6	5 45	6 5	57
27	F	Pollux souths at 9h 5m P.M. at an altitude of 66° 51′	6 53	13 6	30	5 33	10 2	5 39	55¼	0 22	7	6 15	6 35	58
28	S	Length of day 10h 46m	6 52	12 55	30¼	5 35	10 31	6 28	58	1 29	☽	6 55	7 20	59
29	♑	1ST SUN. in LENT	6 50	12 43	30¾	5 37	11 8	7 20	60	2 36	9	7 45	8 20	60

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 2h.	4h.	6h.	Moon's Age.	After Sunset. O'Clock. 6h.	8h.	10h.
			11			
			12			
			13			
			14			
			●			
			16			
			17			
			18			
			19			
			20			
			21			
			☾			
			23			
			24			
			25			
			26			
			27			
			28			
			29			
			○			
			1			
			2			
			3			
			4			
			5			
			6			
			7			
			☽			
			9			

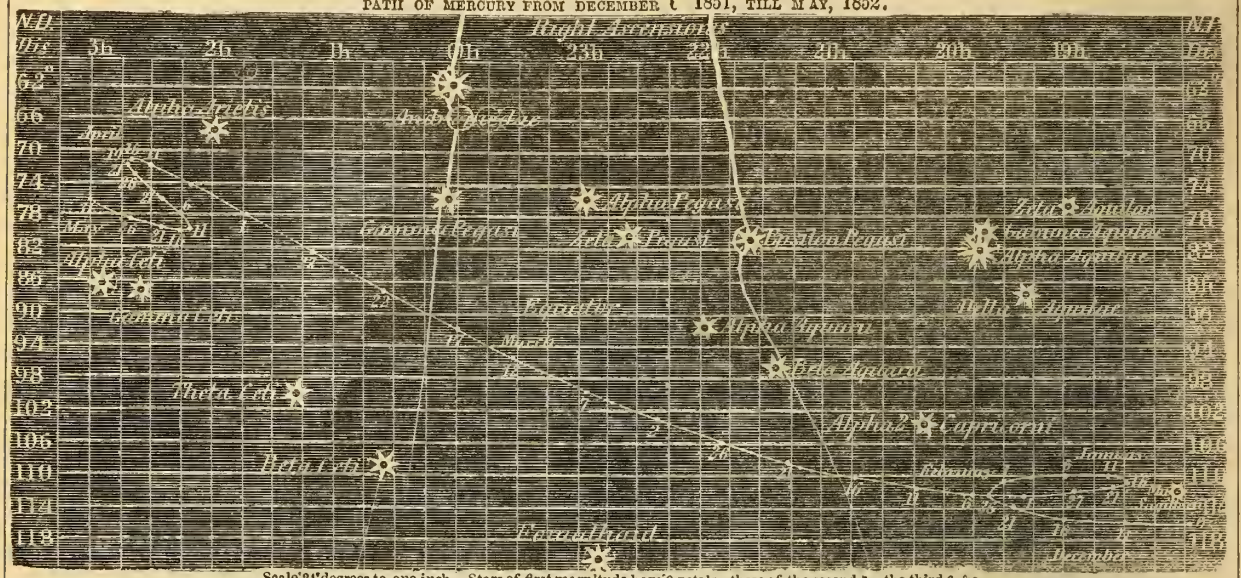
FEBRUARY.

Hark! voice to voice is answering. Dare they sing
In thy stern kingdom, Winter? List, the notes
Stream fresh and joyous, through no faltering throats,
On the keen, echoing air! Dost tremble, King?
What if thy glad-voiced rival, bright-eyed Spring,
Already sends his heralds bold and leal,
Woodlark and Thrush, to bid thy vassals kneel
And do him homage? 'Tis thy doom they bring.
Mask thee, and fly them! We, whom thou 'st immured
In home and hall, our portals sentinelling
With stoniest hail, have well thy wrath endured,
With pastimes and disguise made glad our dwelling,
And e'en young Love to grace our sports have lured—
Through Poets' rhymes our own affections telling. B.

Pillowed on clouds that shine phosphoric 'round,
Lo! February pale thought-wrapt appears,
Like some proud youth whose sleeping fancies bound
With dull forebodings, all "the future" wears.
Anon young Hope renewing life bestows,
Fans his cold temples, plants the infant rose;
With magic finger melts the frozen sky
To showery rainbows, at whose lucent fall
Spring-bowers prepare their greenling tracery,
And snow-drops hold the virgin festival.
Loud from the farm bold chanticleer is heard,
Soft at our window sings the sacred bird;
While hill-tops, crown'd with snows and shrouding mists
At ruddy dawn are tipped with amethysts. K.

FEBRUARY.

PATH OF MERCURY FROM DECEMBER 6 1851, TILL MAY, 1852.



Scale 24 degrees to one inch. Stars of first magnitude have 8 petals; those of the second 7; the third 6, &c.

THE SUN is situated south of the Equator, and moving northwards; he is in the sign Aquarius (the Water-bearer) till the 19th, having been in that sign 29 days 14 hours 21 minutes. On the 19th, at 10h. 49m. A.M., he enters the sign Pisces (the Fishes). His distance from the earth on the first day is 93,632,000 miles. He rises and sets on the 11th at the E.S.E. and W.S.W. points of the horizon. His time of passing the meridian is shown daily in common clock time, and in the adjacent columns his altitude at the same time is shown in the Calendar pages.

On the 1st, the MOON enters the constellation Taurus, and on the 2nd Gemini, passing through the Milky Way; she enters on the 3rd into Cancer; on the 5th, into Leo; on the 7th, into Virgo, in which constellation she remains until the 11th, when she passes into Libra; on the 12th, she enters Scorpio; on the 13th, Serpentarius, passing through the Milky Way, which she leaves on the 14th, and on the 15th enters Sagittarius; on the 17th, Capricornus; on the 19th, Aquarius; on the 21st, Pisces; on the 22nd, Cetus; on the 23rd, she skirts the constellation Pisces, and on the 24th enters Cetus; on the 25th Aries; on the 26th, Taurus; on the 29th she is in the Milky Way, which on the 30th she leaves, and passes into Gemini.

She is above the horizon when the Sun is below, during the evening hours till the 7th, and after the 23rd; and during the morning hours from the 2nd to the 14th.

She is near Mars on the 4th; Jupiter on the 12th; Mercury on the 18th; Venus on the 22nd; Saturn on the 24th; and Uranus on the 24th.

She is at her extreme north declination on the 3rd; crosses the Equator on the 9th; is at her extreme south declination on the 16th; crosses the Equator on the 23rd; and nearly reaches her extreme north declination a second time on the 29th.

MERCURY is in the constellation Sagittarius till the 10th; in Capricornus till the 27th; and in Aquarius till the end of the month. He rises on the 1st at 6h. 26m. A.M.; on the 15th, at 6h. 43m. A.M.; and nearly at about the time of sunrise towards the end of the month; on the 1st, at about 1½h. before the Sun, which interval by the 17th is decreased to half an hour; till this time the planet is moderately well situated for being seen before sunrise. He rises a little south of the S.E. by E. at the beginning of the month; at the same point about the middle, and near the E.S.E. at the end of the month, throughout which he is moving eastward among the stars. He is in aphelion on the 14th; is near the Moon on the 18th. For his path in the heavens, see diagram above.

VENUS is in the constellation Aquarius till the 5th, and in Pisces till the end of the month. She is an evening star throughout the month, and sets on the 1st day at 7h. 31m.; on the 15th, at 8h. 15m.; and on the last day at 8h. 56m.; near the W. by S. at the beginning; the W. on the 17th; and the W. by N. at the end of the month; she is moving eastward among the stars, is on the Equator at about midnight on the 17th; and is near the Moon on the 22nd. For her path see the diagram next month.

MARS is in the constellation Cancer throughout the month. He is visible throughout the night. He rises before sunset, and sets at about the time of sunrise. He rises at about midway between the N.E. by E. and the N.E. points of the horizon, and sets a few degrees north of the N. W. by W. point of the horizon. He is moving slowly westward among the stars towards Castor and Pollux, as shown in the diagram in April. He is near the Moon on the 4th. His path in the heavens and relative position to the large stars near him are shown in the diagram in April.

Relative appearance of the 1st, 2nd, and 3rd Satellites to Jupiter at their times of immersion.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Aftern.	Mars. Aftern.	Jupiter. Morning.	Saturn. Aftern.	Uranus. Aftern.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	10 30	2 11	11 31	6 31	5 5	5 11
6	10 37	2 14	11 4	6 16	4 46	4 52
11	10 46	2 16	10 38	5 58	4 28	4 32
16	10 56	2 19	10 13	5 40	4 10	4 13
21	11 8	2 21	9 49	5 21	3 52	3 54
26	11 21	2 23	9 27	5 3	3 34	3 35
29	11 28	2 25	9 14	4 51	3 23	3 24

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Disappear.	2nd Satellite. Disappear.
d. h. m.	d. h. m.
5 2 29 A.M.	13 2 54 A.M.
12 4 22 A.M.	20 5 27 A.M.
19 6 16 A.M.	
18 2 37 A.M.	

3rd Satellite.

Re-appearance.

24 2 18 A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
A Star	6	1 0 50 A.M.	Dark	2° N. &
		1 1 50 A.M.	Bright	74° N.
i Tauri	5½	1 3 7 A.M.	Dark	N. of 10° N.
63 Geminorum	6	3 6 36 P.M.	Dark	15° N. &
		3 7 42 P.M.	Bright	82° N.
Omicron 2 Libræ	6	12 4 25 A.M.	Bright	26° N. &
		12 5 8 A.M.	Dark	75° N.
Delta 1 Tauri	4	27 10 34 P.M.	Dark	N. of 10°
		27 11 27 P.M.	Bright	N.
Delta 3 Tauri	5	27 11 57 P.M.	Dark	5° S. &
		28 0 41 A.M.	Bright	67° N.

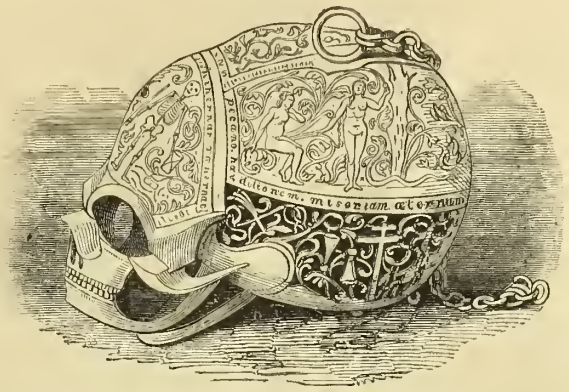
TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
FULL MOON ...	5	6	52	P.M.
LAST QUARTER	12	10	3	A.M.
NEW MOON ...	20	0	54	A.M.
FIRST QUARTER	28	5	31	A.M.
PERIGEE ...	7	4		P.M.
APOGEE... ...	23	At Noon.		

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m	° ′
1	19 18	111 56	22 55	98 27	8 16	65 40	15 17	107 2	1 49	81 19	1 54	78 44	22 31	60 5
6	19 45	111 41	23 13	95 56	8 9	65 20	15 18	107 9	1 50	81 11	1 55	78 42	22 31	60 1
11	20 14	110 56	23 40	93 21	8 2	65 7	15 20	107 14	1 52	81 2	1 56	78 39	22 32	59 57
16	20 45	109 40	0 2	90 41	7 57	64 59	15 22	107 19	1 53	80 53	1 56	78 35	22 33	59 53
21	21 17	107 50	0 24	88 7	7 53	64 57	15 23	107 22	1 55	80 43	1 57	78 32	22 34	59 49
26	21 48	105 27	0 46	85 30	7 50	65 0	15 24	107 25	1 56	80 32	1 58	78 28	22 34	59 46
29	22 9	103 45	0 59	83 57	7 49	65 4	15 21	107 26	1 57	80 26	1 58	78 25	22 35	59 43

FEBRUARY.



MEMENTO MORI WATCH OF MARY QUEEN OF SCOTS.

MARY, QUEEN OF SCOTS, EXECUTED AT FOTHERINGHAY,

FEBRUARY 8TH, 1587.

THE relics of the ill-fated "Mary of Scotland," her prison-houses, and memorials of her captivity, are very numerous. Of the castle of Fotheringhay, the scene of her death, not one stone remains upon another, to mark the site with melancholy, of her who wrote with a diamond in one of the fortress windows:—

"From the top of all my trust,
Mishap hath laid me in the dust."

The Lauder family, of Grange and Fountain Hall, possess the *Memento Mori* Watch here engraved, they having inherited it from their ancestors, the Setoun family. It was given by Queen Mary to Mary Setoun, of the house of Wintoun, one of the four Marys, maids of honour to the Scottish Queen. This very curious relic must have been intended to be placed on a *prie-dieu*, or small altar, in a private oratory; for it is too heavy to have been carried in any way attached to the person. The watch is of the form of a skull: on the forehead is the figure of Death, standing between a palace and a cottage; around is this legend from Horace: "*Pallida mors æquo pulsat pede pauperum tabernas Regumque turres.*" On the hind part of the skull is a figure of Time, with another legend from Horace: "*Tempus edax rerum tuque invidiosa vetustas.*" The upper part of the skull bears representations of Adam and Eve in the garden of Eden, and of the Crucifixion, each with Latin legends; and between these scenes is open-work, to let out the sound when the watch strikes the hours upon a small silver bell, which fills the hollow of the skull, and receives the works within it when the watch is shut.

The Athol family possesses another interesting memorial of the unfortunate Queen in the Royal Harp, presented by her to the daughter of George Gardyn, after a magnificent hunt and banquet given to Her Majesty by the Earl of Athol, in the neighbourhood of Balmoral, now also honoured as the abode of Royalty. This Harp had in front of the upper arm the Queen's portrait, and the arms of Scotland, both in gold. On the right side, (here engraved,) in the circular space, near the upper end of the fore-arm, was placed a jewel of considerable value; and on the opposite side, in a similar circular space, was fixed another precious stone; of all which it was despoiled in the Rebellion, 1745.

A fine old place associated with the hapless Queen of Scots is Hardwick Hall, which contains several relics brought from Chatsworth and Sheffield by Elizabeth, Countess of Shrewsbury, the foundress of Hardwick. The present mansion was built about 1590: we have preferred to engrave the adjoining remains of Old Hardwick Hall, about which ivy and evergreens cling with fond luxuriance. The approach to Hardwick by the park, with its hundreds of deer and its wide-spreading oaks; the silver stream, with its wooded margin; and the fair greensward, with the Hall itself in the distance;—complete a landscape such as can rarely be enjoyed except in England.

PART OF OLD HARDWICK HALL.

MARCH, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Morning.	MOON. Souths. Aftern.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. h. 4h. 5h.	Moon's Age	DURATION OF MOONLIGHT. After Sunset. O'Clock. 7h. 8h. 10h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	M	*S. David.* [Hare hunting ends.	6 48	12 31	31	5 39	Aftern.	8 15	60¾	3 40		10		8 57	9 40	61
2	Tu	*S. Chad.* [Bustard shoot. ends.	6 46	12 19	31½	5 40	0 54	9 13	59¾	4 37		11		10 20	11 4	62
3	W	*Ember Week*	6 44	12 6	31¾	5 42	2 3	10 11	57½	5 25		12		11 45	No Tide.	63
4	Th	Mars stationary at 10h 38m P.M.	6 42	11 52	32¼	5 43	3 23	11 9	53¾	6 6		13		0 20	0 50	64
5	F	Alpha Orionis souths 6h 58m P.M.	6 39	11 39	32¾	5 45	4 47	12 6	48¾	6 39		14		1 20	1 45	65
6	S	Length of day 11h 8m	6 37	11 24	33	5 47	6 14	Morning.		7 8		○		2 5	2 30	66
7	☽	2ND S. in LENT.	6 35	11 10	33½	5 49	7 41	1 2	43	7 32		16		2 50	3 10	67
8	M	*Old S. Mat.* [*Per.*	6 33	10 54	33¾	5 51	9 8	1 56	36¾	7 52		17		3 30	3 55	68
9	Tu	Castor souths at 8h 18m, at an altitude of 70° 44′	6 30	10 39	34¼	5 52	10 31	2 50	31	8 18		18		4 15	4 35	69
10	W	Day breaks at 4h 34m	6 27	10 23	34½	5 54	11 53	3 43	25½	8 44		19		4 55	5 20	70
11	Th	Twilight ends at 7h 49m	6 25	10 7	35	5 56	Morning.	4 37	21	9 12		20		5 40	6 0	71
12	F	*St. Gregory*	6 22	9 51	35¼	5 58	1 11	5 32	17¾	9 47		☾		6 25	6 45	72
13	S	Sirius souths at 7h 12m, at an altitude of 12°	6 20	9 34	35¾	5 59	2 21	6 27	15¼	10 29		22		7 10	7 40	73
14	☽	3RD S. in LENT	6 17	9 17	36¼	6 1	3 22	7 21	15	11 20		23		8 15	8 55	74
15	M	Pollux souths 8h 4m, at an altitude of 66° 53′	6 15	9 0	36½	6 3	4 12	8 14	15½	Aftern.		24		9 40	10 25	75
16	Tu	Day breaks 4h 21m	6 12	8 43	37	6 5	4 52	9 5	17¼	1 24		25		11 10	11 50	76
17	W	*St. Pat.* [K.W.S.	6 10	8 25	37¼	6 7	5 24	9 53	20	2 28		26		No Tide.	0 25	77
18	Th	Prs. Louisa b. Ed.	6 8	8 8	37¾	6 9	5 51	10 39	23½	3 36		27		0 54	1 15	78
19	F	Alpha Hydræ souths at 9h 30m, at an alt. of 30½°	6 6	7 50	38	6 11	6 11	11 22	27¾	4 42		28		1 35	1 55	79
20	S	Sun enters Aries at 10h 42m A.M. Spring commen.	6 4	7 32	38½	6 13	6 29	Aftern.	32¼	5 49		●		2 15	2 30	80
21	☽	4TH S. in L. Mid-	6 1	7 14	39	6 14	6 48	0 45	36¾	6 53		1		2 45	3 0	81
22	M	Newton d. 1727 [L	5 59	6 55	39¼	6 16	7 4	1 26	41½	8 0		2		3 15	3 30	82
23	Tu	Castor souths 7h 19m P.M. at an altitude of 70° 44′	5 56	6 37	39¾	6 17	7 21	2 7	46¼	9 5		3		3 45	4 0	83
24	W	Procyon souths at 7h 24m P.M. at an alt. of 44° 7′	5 54	6 19	40	6 19	7 42	2 50	50½	10 12		4		4 15	4 30	84
25	Th	*Annun. Lady Day*	5 52	6 0	40½	6 20	8 4	3 35	54¼	11 19		5		4 44	4 55	85
26	F	Twilight begins 3h 54m	5 49	5 42	41	6 22	8 31	4 22	57½	Morning.		6		5 14	5 30	86
27	S	Length of day 12h 32m	5 47	5 23	41¼	6 23	9 4	5 12	59¾	0 25		7		5 45	6 5	87
28	☽	5TH S. in LENT	5 44	5 5	41¾	6 25	9 45	6 5	60¾	1 29		☽		6 25	6 45	88
29	M	Day increased 4h 57m	5 42	4 46	42	6 26	10 38	7 0	60½	2 28		9		7 10	7 45	89
30	Tu	Alpha Hydræ souths at 8h 50m P.M. at alt. 30½°	5 40	4 28	42½	6 28	11 42	7 56	59	3 18		10		8 20	9 5	90
31	W	Regulus souths at 9h 23m P.M. at an alt. of 51° 12′	5 37	4 9	42¾	6 30	Aftern.	8 52	56	4 1		11		9 50	10 36	91

MARCH.

The winter birds are gone, and on their way
  Mareh winds have sped them. See! in loving quest
  Of warmest guards for many a happy nest,
The pairing tribes in newly plumed array.
Mareh winds are rough, but rudely let them play:
  Young buds are bursting greenly from their cells;
  Poplar and elm are flowering; and the dells
Show gold enamell'd by the crocus gay.
And lo! our guest, the swallow, wheels around,
  Clutches, as if in terror, to the sill,
    Then launches headlong on his wayward chase.
Come, Ernestine, our horses paw the ground—
  Who, when a world 's so busy, can be still?
    Come, for loose rein and spirit-stirring race! B.

Blown by rude gusts, and rolling seuds aloft,
  Mareh fills the noon; while, loosed in grief, full oft
The winds bewail or roar in thunders by:
  Yonder the forest at the sound inclines
Its hoary boughs, that with the movement shed
  Jewels around; and, see! amidst them shines
The daring crocus, with defiant head,
Silver'd with snows, yet opening to the sky.
  Strange are his moods: for now 't is splendour all,
Now sullen gloom, now calm, now pregnant shade,
  Sunshine and storm; now wakes the waterfall,
Now brooklets flow, and now in ice are stay'd.
  Yet, budding out, despite each fickle hour,
  Green tints the bank, and promise shapes the flower. K.

MARCH.

PATH OF VENUS FROM FEBRUARY 9 TILL SEPTEMBER 15, 1852.

Scale 24 degrees to one inch. Stars of the first magnitude have 8 petals; those of the second 7, the third 6, &c.

THE SUN is situated south of the Equator till the 20th, on which day he crosses it a little before noon. He is in the sign Pisces (the Fishes) till the 20th, having been in that sign 29 days, 23 hours, 53 minutes. On the 20th, at 10h. 42m. A.M., he enters the sign Aries (the Ram,) and Spring commences. On the 1st day he is 94,199,000 miles from the Earth. He rises on the 3rd at E. by S; and on the 21st at the E., and sets on the same days at the W. by S. and W. points of the horizon. His daily meridian altitude and his time of passing the meridian are shown daily in the calendar pages.

On the 1st, the Moon is in the constellation Gemini, and on the 2nd enters Cancer; on the 4th she enters Leo; on the 6th, Virgo, in which constellation she remains until the 9th, when she passes into Libra, from thence on the 11th into Scorpio; she then traverses Serpentarius and the Milky Way, entering on the 15th into Capricornius; on the 17th she enters Aquarius; on the 19th, Pisces; on the 20th, Cetus; on the 22nd, Pisces, and on the 23d, Cetus again. On the 24th she enters Aries; and on the 25th, Taurus; on the 27th, she passes through the Milky Way, and on the 28th, enters Gemini; on the 30th, Cancer, and on the 31st, Leo.

She is above the horizon when the Sun is below, during the evening hours, till the 7th, and after the 23rd; and during the morning hours, from the 2nd to the 14th.

She is near Mars on the 2nd; Jupiter, on the 10th; Mercury, on the 21st; Uranus and Saturn, on the 23rd; Venus, on the 24th; and Mars on the 30th.

She is at her extreme north declination on the 1st; crosses the equator on the 7th: is at her extreme south position on the 14th; crosses the equator a second time on the 21st, and reaches her extreme north declination on the morning of the 29th.

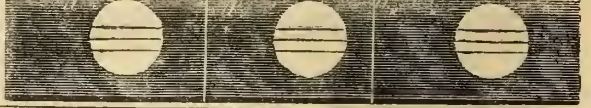
MERCURY is in the constellation Aquarius till the 11th; in Pisces till the 20th; in Cetus till the 24th, and in Pisces again till the end of the month. He rises at about the same time as the Sun till the 9th, and after sunrise from the 10th. He sets before sunset till the 15th; at 6h. 22m. P.M., on the 18th; at 6h. 47m. P.M., on the 21st; at 7h. 10m. P.M., on the 24th; at 7h. 34m. on the 27th; and at 7h. 56m. on the 30th. The interval of time after sunset on the 18th is 14m.; on the 24th is 54m., increasing to 1½h. at the end of the month; therefore, the planet is favourably situated for observation towards the end of the month, near the western horizon. He rises at about the E.S.E. at the beginning of the month; at the E. by S. at about the 11th. He sets at the W. point of the horizon on the 18th; at the W. by N. on the 26th. He is moving eastward among the stars throughout the month; is in superior conjunction with the Sun on the 15th; is near the Moon on the 21st, and in Perihelion on the 29th. For his path in the heavens, and relative position to the neighbouring stars see the diagram in last month.

VENUS is in the constellation Pisces till the 10th; in Cetus till the 12th, and in Aries till the end of the month. She is an evening star throughout the month, and sets on the 1st at 9h. P.M.; on the 15th at 9h. 45m.; and on the last day at 10h. 32m.; near the W. by N. at the beginning; the W.N.W. at the middle, and the N.W. by W. at the end of the month; she is moving eastward among the stars; is near Uranus on the 14th; Saturn on the 15th; and the Moon on the 24th.

MARS is in the constellation Cancer throughout the month; he is visible throughout the greater part of the night, and sets on the 1st at 5h. 40m. A.M.; and on the last day at 3h. 46m. A.M., near the N.W. by W. point of the horizon. He is almost stationary amongst the stars till after the 4th, when he begins to move slowly eastward. He is near the Moon on the 2nd, and again on the 30th. His path in the heavens and relative position to the large stars near him are shown in the diagram in next month.

(Continued on page 22.)

Relative appearance of the 1st, 2nd, and 3rd Satellites to Jupiter at their times of immersion.



TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Aftern.	Mars. Aftern.	Jupiter. Morning.	Saturn. Aftern.	Uranus. Aftern.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	11 31	2 25	9 10	4 47	3 19	3 20
6	11 45	2 27	8 50	4 28	3 2	3 1
11	Noon.	2 30	8 32	4 9	2 44	2 43
16	Aftern.	2 32	8 14	3 49	2 26	2 24
21	0 31	2 35	7 58	3 28	2 9	2 5
26	0 47	2 38	7 42	3 8	1 51	1 46
31	1 1	2 42	7 28	2 47	1 34	1 28

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Disappear.			2nd Satellite. Disappear.		
d.	h.	m.	d.	h.	m.
6	4	31 A.M.	8	11	49 P.M.
15	0	53 A.M.	16	2	22 A.M.
22	2	46 A.M.	23	4	55 A.M.
29	4	40 A.M.			
30	11	8 P.M.			

3rd Satellite. Disap. and Re-ap.			
2	4	10	A.M.
2	16	15	A.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star.			At which limb of the Moon	Between what Latitudes visible.
		d.	h.	m.		
37 Leonis	6	5	2	44 A.M.	Bright	N. of 60
		5	3	36 A.M.	Bright	N
A Star	6	14	5	28 A.M.	Bright	3° & 66
		14	6	14 A.M.	Dark	N.
39 Cancri	6	30	8	45 P.M.	Dark	5° S. &
		30	9	34 P.M.	Bright	61° N.
40 Cancri	6	30	8	45 P.M.	Dark	5° S. &
		30	9	42 P.M.	Bright	61° N.

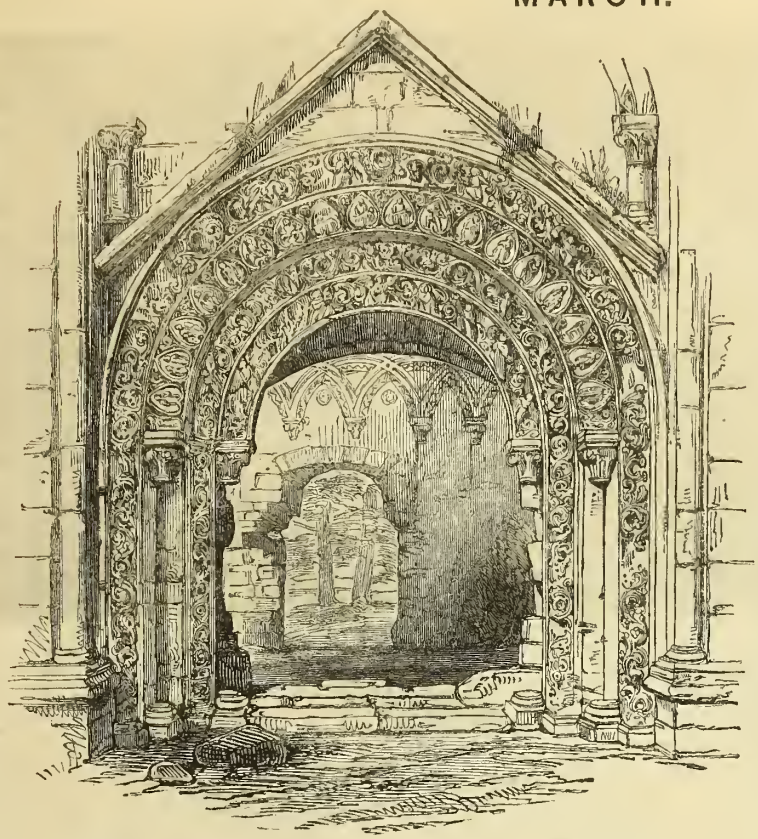
TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
FULL MOON ...	6	5	30	A.M.
LAST QUARTER	12	8	29	P.M.
NEW MOON ...	20	6	43	P.M.
FIRST QUARTER	28	8	50	P.M.
PERIGEE... ...	6	11		P.M.
APOGEE	21	7		P.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	22 15	103 8	1 3	83 26	7 49	65 5	15 24	107 26	1 58	80 24	1 59	78 24	22 30	99 43
6	22 49	99 45	1 25	80 55	7 49	65 15	15 24	107 26	2 0	80 12	1 59	78 20	22 30	99 39
11	23 23	95 50	1 47	78 28	7 50	65 28	15 24	107 25	2 2	80 1	2 0	78 15	22 37	99 35
16	23 52	92 22	2 10	76 9	7 52	65 44	15 24	107 23	2 4	89 89	2 1	78 10	22 37	99 31
21	0 27	87 42	2 32	73 57	7 56	66 3	15 23	107 20	2 6	79 36	2 2	78 5	22 38	99 27
26	1 3	82 58	2 55	71 54	8 0	66 24	15 22	107 16	2 8	79 24	2 3	78 0	22 39	99 23
31	1 37	88 34	3 18	70 2	8 5	66 48	15 21	107 11	2 10	79 11	2 4	78 54	22 40	99 19

MARCH.



REMAINS OF GLASTONBURY ABBEY—THE BURIAL-PLACE OF ST. DAVID.

ST. DAVID'S DAY, MARCH 1.

St. David, the patron saint of Wales, died in 544, and was buried in the church of St. Andrew; but his remains were afterwards removed to Glastonbury Abbey, in Somersetshire, one of the finest Anglo-Norman ecclesiastic edifices in England, and of which some rich remains exist. The specimen here engraved is the north door of St. Joseph's Chapel. This monastery surpassed in revenues all the abbeys in England, except Westminster, and exceeded in size all the cathedrals, except Old St. Paul's. The church at Glastonbury was the burial-place of King Arthur, and Gunevera, his Queen; King Edward, the Elder; King Edgar; Edmund Ironside; Coel, King of Great Britain, the father of Helen, mother to Constantine the Great; also of saints and holy men not a few, as St. Joseph of Arimathea, St. Patrick, with two of his disciples; St. Idractus, with his seven companions, martyrs; St. David, St. Dunstan, Gildas, the British historian, and several of the early Bishops.

QUEEN ELIZABETH DIED MARCH 24, 1603.

Of Elizabeth, whose reign, take it all in all, was a happy as well as a glorious one for England, many curious relics are treasured. One of the most interesting memorials is the Book of Prayers which was presented to Queen Elizabeth by Mrs. Tyrwhit. It is bound in a massive gold cover, having a small ring for a chain by which it depended from the girdle, as was the fashion with ladies of those times. On one side of the cover of this book is represented in enamel the subject of the lifting up of the serpent by Moses in the wilderness, having the following text inlaid around the edges:—

MAKE. THE. A. FYRYEE. SERPENT. AN. SET.T. IT. VP. FOR. A. SYGNE. THAT. AS. MANY. AS. ARE. BYTTE. MAYE. LOKE. VPON. IT. AN. LYVE.

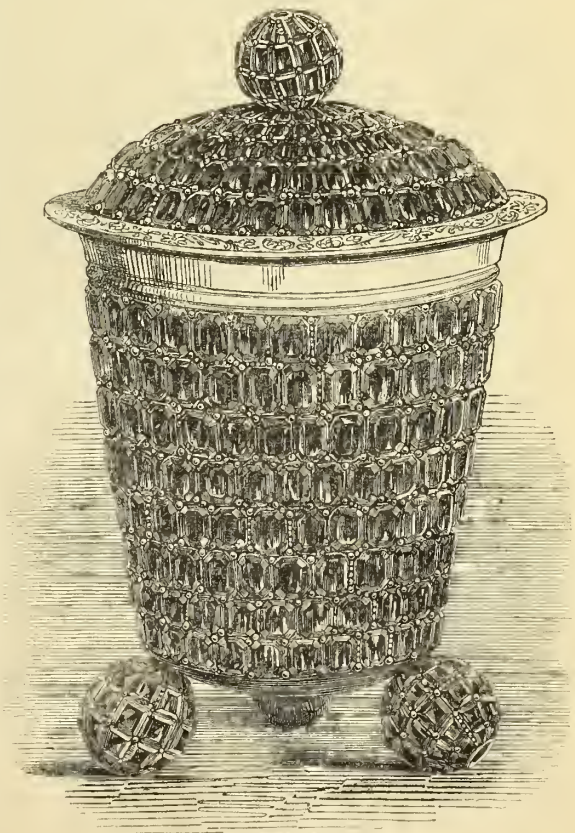
And on the other side is the "Judgment of Solomon," with this legend:—

THEN. THE. KYNG. ANSWERED. AN. SAYD. GYVE. YVYNGE. CHAN. SLAYE. T. NOT. FOR SHE. IS. THE. MOTHER. THEROF.

As it is on record that this or a similar volume was presented to the Lady Elizabeth by her preceptress, Mrs. Tyrwhit, precisely such a book having been described by Anthony à Wood as having belonged to the Queen; who shall say what influence this little book may not have exercised, not only in fixing the religious principles of the Virgin Queen, but even on the future destinies of Protestant England? It formerly belonged to Sir John Cullum, but is now the property of Mr. Farrer.

Next is a richly-jewelled cup, once possessed by Elizabeth. It is of silver gilt; the rim around the cover is engraved with an arabesque, and bears races of coloured enamels and stones which have decorated the leaves and flowers of which it consists. The cover, sides, and knobs are covered with precious stones, many hundreds in number, secured in separate cells, and ranged closely together, in rows, entirely round the vessel. These stones are amethysts of various tints, the interstices of the setting of each being filled with small turquoises, which are, in some instances, as minute asseedpearls, to allow of every part of the cup being incrusted with jewels. The knob on the top of the cover, and the three upon which it stands, are similarly covered with jewels. A false bottom of thin silver covers a cypher; the letters being "E. R.," conjoined in a scroll characteristic of the reign of the Sovereign whose ownership has thus been carefully stamped upon it.

QUEEN ELIZABETH'S BOOK OF PRAYERS—16TH CENTURY.



QUEEN ELIZABETH'S DRINKING-CUP.

APRIL, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Aftern.	MOON. Height above horizon	MOON. Sets. Morning.	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	Th	All Fools Day	5 36	3 51	43¼	6 33	2 15	9 48	51½	4 35	12	11 20	11 58	92
2	F	Camb. T. e. [T. e.	5 34	3 33	43½	6 35	3 39	10 44	46¼	5 5	13	No Tide.	0 25	93
3	S	Rich. Bp. Ch. Ox.	5 32	3 15	44	6 37	5 6	11 38	40¼	5 31	14	0 50	1 15	94
4	✠	6TH S. in LENT.	5 29	2 57	44¼	6 38	6 34	Morning.		5 54	●	1 40	2 5	95
5	M	[PALM S. *St. Am.*	5 27	2 39	44¾	6 39	8 2	0 33	34	6 17	16	2 25	2 45	96
6	Tu	Old Lady Day	5 25	2 22	45	6 41	9 28	1 28	28	6 42	17	3 5	3 30	97
7	W	Epsilon Hydræ souths 7h 34m P.M., alt. of 45° 28′	5 23	2 4	45½	6 42	10 53	2 24	22¾	7 9	18	3 50	4 10	98
8	Th	MaundyThursday	5 22	1 47	45¾	6 44	Morning.	3 20	18¾	7 43	19	4 30	4 55	99
9	F	GOOD FRIDAY	5 20	1 30	46¼	6 46	0 8	4 18	16	8 24	20	5 15	5 35	100
10	S	Length of day 13h 27m	5 18	1 14	46½	6 47	1 14	5 14	15¾	9 13	21	6 0	6 25	101
11	✠	EASTER SUNDAY	5 16	0 58	47	6 49	2 10	6 9	15	10 10	☾	6 50	7 20	102
12	M	Easter Monday	5 13	0 42	47¼	6 50	2 54	7 1	16¼	11 13	23	7 50	8 35	103
13	Tu	Easter Tuesday	5 10	0 26	47¾	6 52	3 29	7 51	18¾	Aftern.	24	9 15	10 0	104
14	W	Alpha Hydræ souths at 7h 48m, at an alt. of 30½°	5 7	0 11	48	6 54	3 57	8 37	22¼	1 26	25	10 40	11 20	105
15	Th	Easter Term beg.	5 5	Before 12 o'clock	48½	6 55	4 19	9 21	26¼	2 35	26	11 55	No Tide.	106
16	F	Regulus souths 8h 20m, at an altitude of 51° 12′	5 3	0 19	48¾	6 57	4 39	10 3	30½	3 40	27	0 25	0 45	107
17	S	Alpha Ur. Maj. north at 9h 10m, at alt. of 78° 56′	5 1	0 33	49¼	6 58	4 54	10 45	35¼	4 47	28	1 10	1 25	108
18	✠	1ST S. aft. EAST.	4 59	0 46	49½	7 0	5 13	11 25	40	5 50	29	1 45	2 0	109
19	M	*Alphage* [Low S.	4 57	1 0	49¾	7 2	5 30	Aftern.	44¾	6 57	○	2 15	2 30	110
20	Tu	Beta Leonis souths 9h 45m, at an altitude of 53° 55′	4 55	1 13	50¼	7 3	5 47	0 49	49¼	8 3	1	2 45	3 0	111
21	W	Ox. & Cam. T. beg.	4 53	1 25	50½	7 5	6 8	1 33	53¼	9 12	2	3 15	3 30	112
22	Th	Beta Corvi souths 10h 22m P.M., at an alt. of 15° 57′	4 51	1 37	50¾	7 6	6 32	2 19	56¾	10 18	3	3 45	4 0	113
23	F	*St. George*	4 49	1 49	51¼	7 8	7 3	3 8	59¼	11 22	4	4 15	4 30	114
24	S	[*St. Mk.* Prs. Alice b. Des. Glou. b.	4 47	2 0	51½	7 10	7 42	4 0	60¾	Morning.	5	4 45	5 5	115
25	✠	2ND S. aft. EAST.	4 45	2 11	51¾	7 11	8 29	4 53	61	0 23	6	5 20	5 40	116
26	M	Day increased 6h 45m	4 43	2 21	52¼	7 13	9 27	5 48	60	1 16	7	6 5	6 30	117
27	Tu	Spica souths 10h 53m, at an altitude of 48° 54′	4 41	2 31	52½	7 14	10 36	6 43	57½	2 0	☽	6 55	7 25	118
28	W	Arcturus souths 11h 41m at an altitude of 58° 28′	4 39	2 40	52¾	7 16	11 52	7 37	53¾	2 36	9	8 0	8 45	119
29	Th	Length of night 9h 19m	4 37	2 49	53	7 18	Aftern.	8 30	49	3 6	10	9 30	10 10	120
30	F	Length of day 14h 45m	4 35	2 57	53½	7 20	2 35	9 23	43¼	3 31	11	10 50	11 30	121

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 2h. 3h. 4h. — After Sunset. O'Clock. 8h. 9h 10h.

APRIL.

April has sent her cuckoo, and his call
  Bids you all forth: the woods are fresh and fair:
  A thousand perfumes on the softened air
Are incense Nature offers for you all,
As thanks her limbs are free from Winter's thrall.
  The streams are full of life, and anglers tell
  That skill-less hands may hold their victims well—
Victims unused to mark the treacherous fall
Of snares upon the waters. Lilian young,
  Go with thy elder Clare, to yonder brook—
And as thou seest the quivering fishes hung,
  Their spangles crimsoned by the deadly hook,
She 'll teach thee baits for hearts,—the prattling tongue,
  Wise when most wild—feigned sigh—and piteous look.

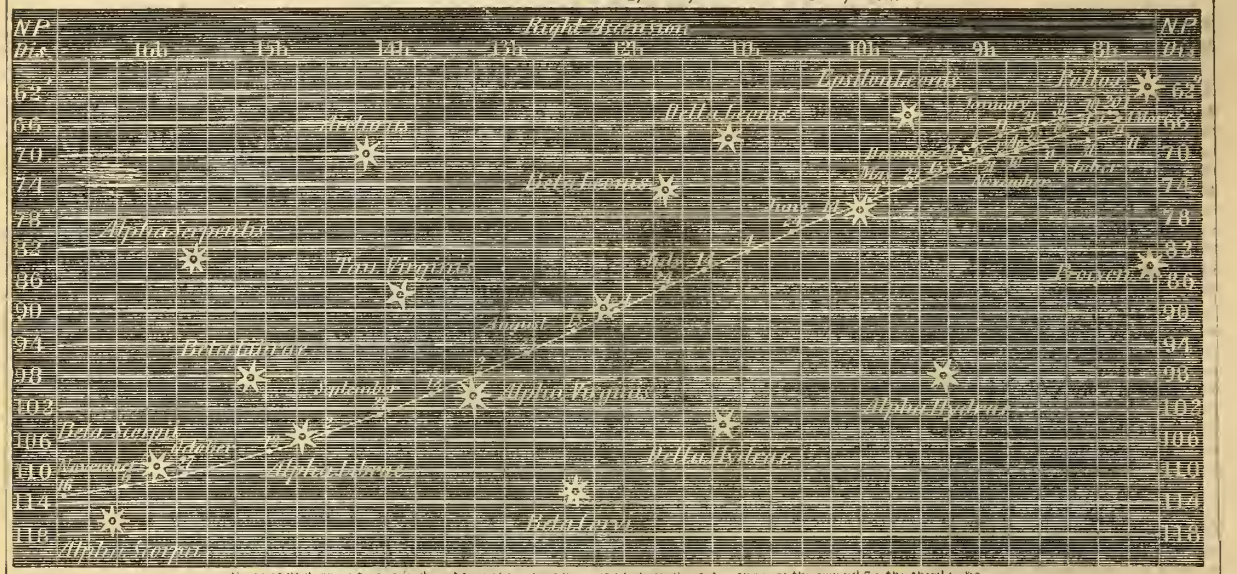
B.

April returns: her blue voluptuous eye,
  Now steeped in light, now charged with sudden tears,
Potent as spells enchantress' arts apply.
  Lo! at her beck each sapling bloom appears;
Violets whose breath the curious winds endow
  Lavish with sweets; anemones; and, more,
Those cups profuse, like drops of gold that blow,
  The gaudy wort and yellow hellebore.
Now waters lift their silvery arms, to greet
  The green moss thickening rich in noonday sun;
Pastures and lawns and wood-nymphs' quaint retreat,
  Kindling with sprouts, by thousand dews are spun.
From clasping earth sweet herbs and grasses rise,
Load the fresh gale, and mix congenial sighs.

K.

APRIL.

PATH OF MARS FROM OCTOBER 11, 1851, TO NOVEMBER 16, 1852.



Scale of 24 degrees to one inch. Stars of the first magnitude have 8 points; those of the second 7; the third 6, &c.

THE SUN is situated north of the Equator, and is moving north; on the 19th, at 10h. 50m. P.M., he passes from the sign Aries (the Ram) into that of Taurus (the Bull), having been in the former sign 30 days 12 hours and 8 minutes. On the 1st he is 95,013,000 miles from the Earth. He rises, on the 8th, at the E. by N.; on the 28th, at the E.N.E.; and sets, on the same days, at the W. by N. and W.N.W. points of the horizon. His meridian altitude, and time of passing the meridian in ordinary clock time, are shown daily in the Calendar pages.

On the 1st, the Moon is in the constellation Leo; and on the 2nd, enters Virgo, where she continues until the 5th, when she passes into Libra; on the 7th she enters Scorpio, and passing through Serpentarius and the Milky Way, enters on the 9th into Sagittarius, and on the 10th into the Milky Way again; on the 11th, she enters the constellation Capricornus; on the 13th, Aquarius; on the 15th, Pisces; on the 16th, Cetus; on the 18th, Pisces; and on the 19th re-enters Cetus; on the 20th she passes into Aries; on the 22nd, into Taurus; on the 23rd she enters the Milky Way, and passing through Gemini, arrives at Cancer, which constellation she enters on the 26th; on the 27th she is in Leo; and on the 29th in Virgo.

She is above the horizon when the Sun is below, during the evening hours till the 5th, and after the 21st; and during the morning hours till the 11th, and after the 28th.

She is near Jupiter on the 6th; Uranus on the 19th; Saturn on the 19th; Mercury on the 20th; Venus on the 23rd; and Mars on the 27th.

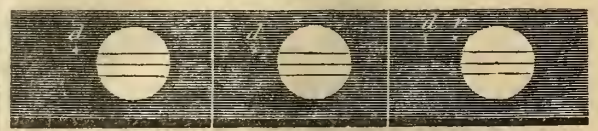
She is on the Equator on the 4th; is at her extreme south declination on the 10th; again crosses the equator on the 17th; and reaches her greatest north declination on the 25th.

MERCURY is in the constellation Aries throughout the month. He rises after the Sun throughout the month, and therefore is not visible in the mornings. He sets after the Sun on the 1st, at 8h. 10m.; on the 9th, at 8h. 47m.; on the 18th, at 8h. 41m.; and on the last day, at 7h. 10m. The interval of time between the Sun and the planet setting is 1h. 39m. on the 1st; increasing to 2h. 3m. on the 9th; and decreasing, after the 12th, to 1h. 55m. on the 15th; to 57m. by the 24th; and to 9 minutes only on the last day. Therefore the best time throughout the year for seeing this small planet with the naked eye is in this month, particularly between the 6th and the 15th, when he will be seen near the horizon in the west; he sets near the W.N.W. point of the horizon at the beginning of the month; near the N.W. by W. at about the middle; and again near the W.N.W. towards the end of the month. He is moving eastward among the stars till the 18th; he is stationary amongst them on the 19th; and moving westward during the remainder of the month. He is near Uranus on the 5th; Saturn on the 7th; is at his greatest elongation on the 9th; near the Moon on the 10th; and in inferior conjunction with the Sun on the 30th. For his path in the heavens, and relative position to the neighbouring stars, see February.

VENUS is in the constellation Taurus throughout the month. She is an evening star, and begins to shine with brilliancy; she sets on the 1st, at 10h. 37m.; on the 15th, at 11h. 16m.; and on the last day, at 11h. 45m. She sets in the commencement of the month at the N.W. by N. and N.W. at the end of the month. She is moving eastward among the stars; is near the Pleiades during the first few days; near the Moon on the 23rd; and Beta Tauri towards the end of the month.

(*Continued on page* 42.)

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION.



1st Sat. 2nd Sat. 3rd Sat.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Aftern.	Venus. Aftern.	Mars. Aftern.	Jupiter. Morning.	Saturn. Aftern.	Uranus. Aftern.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	1 3	2 42	7 25	2 43	1 31	1 24
6	1 11	2 46	7 12	2 21	1 13	1 5
11	1 11	2 50	6 59	2 0	0 56	0 47
16	1 2	2 54	6 46	1 38	0 39	0 28
21	0 44	2 58	6 34	1 17	0 21	0 10
26	0 18	3 2	6 23	0 55	0 4	Morn.
30	Morn.	3 5	6 14	0 37	Morn.	11 36

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Disappear.	2nd Satellite. Disappear.
d. h. m.	d. h. m.
7 1 2 A.M.	9 11 19 P.M.
14 2 56 A.M.	17 1 53 A.M.
15 9 24 P.M.	24 4 28 A.M.
22 11 18 P.M.	3rd Satellite.
30 1 12 A.M.	Disap. and Re-ap.
	7 0 4 A.M. D.
	7 2 2 A.M. R.
	14 4 2 A.M. D.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m		
80 Virginis	6	5 0 32 A.M.	Bright	0° & 85°
		5 1 32 A.M.	Dark	N.
A Star	6	10 5 17 A.M.	Bright	9° & 66°
		10 6 22 A.M.	Dark	N.
Zeta Tauri	3½	23 9 50 P.M.	Dark	N. of 20°
		23 10 43 P.M.	Bright	N.

TIMES of CHANGES of the MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
FULL MOON ...	4	2	24	P.M.
LAST QUARTER	11	8	59	A.M.
NEW MOON ...	19	11	45	A.M.
FIRST QUARTER	27	8	3	A.M.
PERIGEE... ...	4	11	0	A.M.
APOGEE	17	10	0	P.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	1 43	77 46	3 23	69 41	8 6	66 53	15 21	107 10	2 11	79 9	2 4	77 53	22 40	99 18
6	2 11	74 22	3 47	68 4	8 12	67 20	15 19	107 3	2 13	78 56	2 5	77 47	22 40	99 14
11	2 31	72 8	4 10	66 40	8 19	67 50	15 17	106 56	2 15	78 43	2 6	77 41	22 41	99 11
16	2 41	71 10	4 33	65 30	8 26	68 22	15 15	106 48	2 18	78 30	2 7	77 36	22 41	99 8
21	2 43	71 30	4 57	64 35	8 34	68 57	15 13	106 39	2 20	78 18	2 9	77 30	22 42	99 5
26	2 37	73 0	5 21	63 56	8 42	69 35	15 11	106 29	2 23	78 5	2 10	77 23	22 42	99 3
30	2 26	75 13	5 39	63 36	8 49	70 6	15 9	106 22	2 25	77 53	2 11	77 18	22 43	99 0

APRIL.

THOMAS SACKVILLE, EARL OF DORSET, POET, DIED APRIL 19, 1608.

All that remains of Buckhurst, near East Grinstead, in Sussex, the magnificent seat of the Sackvilles, is a solitary tower-gateway, indicating the style of the mansion, built by John Thorpe. Buckhurst attained its zenith and decline in the time of Thomas Sackville, the first Earl of Dorset, Lord Treasurer to Queen Elizabeth. Sackville wrote the Introduction to "The Mirrour for Magistrates," a remarkable poem for the age; and exhibiting, in some parts, a strength of description and a power of drawing allegorical characters scarcely inferior to Spenser. Precisely a century later lived Charles Sackville, Earl of Dorset, a sparkling poet, and a liberal patron of poets, and who introduced Butler's "Hudibras" at Court, was consulted by Waller, and almost idolized by Dryden and Prior.

REMAINS OF BUCKHURST, THE SEAT OF THE SACKVILLES, EARLS OF DORSET.

Sackville being, according to Camden, "equally eminent for prudence and nobility," found it incompatible with his public duties to travel so far from London as 28 miles, to Buckhurst, through "fowle ways," and therefore obtained from his royal mistress a grant of Knole, in Kent. Buckhurst being deserted, the greater part of the house was taken down, and its materials conveyed to East Grinstead, where a college or hospital was built in 1609, by Robert Sackville, second Earl of Dorset, for the maintenance of a warden and thirty poor brethren and sisters; and the noble foundation is maintained to this day. The celebration of our Church festivals (Palm Sunday, for example) in the great hall of Sackville College, presents a very interesting scene of the inmates enjoying the hospitalities of olden custom.

WILLIAM WORDSWORTH, POET LAUREAT, DIED APRIL 23, 1850.

At Rydal Mount, Westmoreland, a lovely cottage-like building, almost hidden by a profusion of rose-trees and ivy, the venerable bard of the Lake passed from amongst us. Wordsworth was born at Cockermouth, in 1770; wrote his first verses at the age of thirteen, and first published his Ballads in 1798. In 1814 appeared his most celebrated work, "The Excursion;" and in 1815, "The White Doe of Rylstone." In addition, he was the author of many exquisite sonnets and minor poems. At the death of Southey, he succeeded to the office of Poet Laureat; but William Wordsworth needed no such Court distinction or decoration. "His name will live in English literature and his funeral song be uttered amidst the spots which he has so often celebrated, and by the rivers and hills which inspired his verse."

Rydal Mount, the picturesque retreat of Wordsworth, is situated between Ambleside and Keswick. The accompanying view shows the rear of the house. The prospect from the grassy mound in front is very fine, including Loughrigg Fell, backed by Nab Scar; and Windermere, Rydal Water, and Grasmere are seen from this charming spot.

RYDAL MOUNT, THE RESIDENCE OF THE POET WORDSWORTH.—FROM AN ORIGINAL DRAWING.

MAY, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises.	MOON. Souths. Aftern.	MOON. Souths. Aftern.	MOON. Souths. Height above horizon	MOON. Sets.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	S	*St. Phil. & St. Jas.*	4 33	3 5	53¾	7 22	4 1	10 16	37¼		3 53		12		11 55	No Tide.	122
2	Su	3rd S. aft. Easter.	4 31	3 12	54	7 24	5 27	11 10	31		4 16		13		0 25	0 50	123
3	M	Inv. of the Cross	4 29	3 19	54¼	7 25	6 54	Morning.			4 39				1 14	1 35	124
4	Tu	Beta Leonis souths 8h 50m, at an altitude of 53° 55′	4 28	3 25	54½	7 26	8 21	0 6	25½		5 5		15		1 57	2 20	125
5	W	Beta Corvi souths 9h 31m, at an altitude of 15° 57′	4 26	3 31	54¾	7 27	9 43	1 2	20½		5 35		16		2 45	3 5	126
6	Th	*St. John Evang.*	4 25	3 35	55¼	7 29	10 59	2 1	17		6 12		17		3 30	3 50	127
7	F	Spica Virginis souths 10h 14m, at an alt. of 28° 8′	4 23	3 40	55½	7 30	Morning.	3 0	15		6 59		18		4 10	4 30	128
8	S	Half-Q.D. E.T.e.	4 21	3 44	55¾	7 32	0 2	3 58	14½		7 55		19		4 55	5 20	129
9	Su	4th S. aft. Easter.	4 20	3 47	56	7 33	0 53	4 53	15½		8 58		☾		5 40	6 5	130
10	M	Mercury in conjunction with Uranus at 11h 46m	4 18	3 50	56¼	7 35	1 31	5 45	17½		10 6		21		6 30	7 0	131
11	Tu	Time of daybreak 1h 25m	4 16	3 52	56½	7 37	2 1	6 34	20¾		11 15		22		7 30	8 5	132
12	W	Length of day 15h 23m	4 15	3 53	56¾	7 38	2 25	7 19	24½		Aftern.		23		8 45	9 20	133
13	Th	Old May Day	4 13	3 54	57	7 40	2 45	8 2	29		1 29		24		10 0	10 35	134
14	F	Arcturus souths 10h 38m, at an altitude of 58° 28′	4 12	3 54	57¼	7 42	3 4	8 43	33½		2 35		25		11 10	11 40	135
15	S	Beta Libræ souths 11h 34m, at an alt. of 29° 51′	4 11	3 54	57½	7 43	3 20	9 24	38¼		3 40		26		No Tide.	0 5	136
16	Su	5th S. aft. Easter.	4 10	3 53	57¾	7 45	3 37	10 5	43¼		4 46		27		0 30	0 45	137
17	M	Alpha Coronæ Borealis sths. 11h 46m, at alt. 65° 44′	4 8	3 52	58	7 46	3 54	10 47	47¾		5 54		28		1 5	1 25	138
18	Tu	Alpha Serpentis souths 11h 50m, at an alt. of 45° 25′	4 7	3 50	58¼	7 47	4 14	11 30	52		7 2		29		1 40	2 0	139
19	W	*Dunstan*	4 5	3 47	58½	7 49	4 36	Aftern.	55¾		8 10		○		2 15	2 30	140
20	Th	*Asc. D. Holy Th.*	4 3	3 44	58½	7 50	5 5	1 5	58¾		9 16		1		2 45	3 0	141
21	F	Length of day 15h 50m	4 2	3 40	58¾	7 52	5 40	1 56	60½		10 19		2		3 20	3 35	142
22	S	Trinity Term beg.	4 0	3 36	59	7 53	6 25	2 50	61¼		11 14		3		3 55	4 10	143
23	Su	S. aft. Ascen. Day	3 59	3 31	59¼	7 55	7 20	3 44	60¾		Morning.		4		4 30	4 45	144
24	M	Queen Vic. b. 1819	3 58	3 26	59¼	7 57	8 25	4 38	58¾		0 2		5		5 3	5 30	145
25	Tu	Ps. Helena b. 1846	3 57	3 20	59½	7 58	9 39	5 32	55¼		0 39		6		5 55	6 20	146
26	W	Aug. Abp. Ca. Const. Twlgt.	3 56	3 14	59¾	7 59	10 55	6 24	51		1 11		☽		6 45	7 15	147
27	Th	Pr. Ge. I. b. V. Bede	3 55	3 7	59¾	8 0	Aftern.	7 16	45¾		1 36		8		7 50	8 30	148
28	F	Beta Scorpii souths 11h 31m, at an alt. of 19° 8′	3 55	3 0	60	8 1	1 38	8 7	40		1 59		9		9 10	9 45	149
29	S	K.C.H. res. O.T.e	3 54	2 53	60¼	8 2	3 0	8 58	34		2 20		10		10 15	10 50	150
30	Su	Pentecost. W.S.	3 53	2 45	60¼	8 2	4 25	9 51	28		2 40		11		11 20	11 50	151
31	M	Whit M. [C.T.div.	3 52	2 37	60½	8 3	5 50	10 46	22¾		3 5		12		No Tide	0 20	152

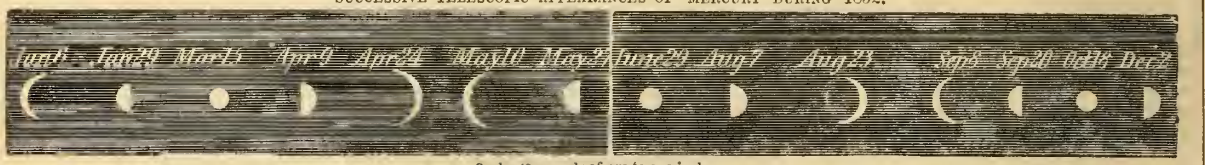
MAY.

Flowers where the eye can fall, and if it rise,
A brighter hue than theirs is heaven's. 'T is May,
Chosen for ages as Earth's holiday—
I know not if the early choice were wise.
Lovely is May, yet, to her radiant eyes,
When most confiding lovers hold them dear,
Will sudden start the hot and angry tear,
Perchance, not quite forgotten when it dries.
Caprice, which fits her well; but if away
One still would say 't were well. But mark her smile!
Oh! in some dew-bright, pearly glade to hide,
Lured by some smile like her's that never cloys.
Mother and child! have ye withdrawn awhile,
To mingle loves and tresses, as ye guide
Yon pendulum, that beats no time but Joy's? B.

Sweet May is ours! the fresh sun-mantled May,
Blushing and spotless as a bride should be,
With all her lily train of handmaids. See!
Now finger-link'd they come, where smiles the day
In rosy warmth! The modest iris, pure
And dazzling as the dawn of early love;
Pale hyacinths, whose honied lips insure
Caresses frequent as those sighs to allure
They breathe o'erpowering on the gales above.
Nor aught forgotten seeks the bridal queen
Her showering Daphne, jonquils, or the fair
Snow-hillocks of virginia-stock, whose sheen
Her pathway lights; while earth, and sky, and air,
Rejoicing, each a nuptial aspect wear. K

MAY.

SUCCESSIVE TELESCOPIC APPEARANCES OF MERCURY DURING 1852.



Scale, 40 seconds of arc to one inch.

THE SUN is situated north of the Equator, and is moving northward. On the 20th, at 10h. 56m. P.M., he passes from the sign Taurus (the Bull) to that of Gemini (the Twins), having been in the former sign 31 days and 6 minutes. On the 1st day he is 95,794,000 miles from the Earth. He rises and sets on the 26th at the N.E. by N. and N.W. by N. points of the horizon respectively. His meridian altitude and time of passing the meridian are shown daily in the Calendar pages.

On the 1st, the MOON is in the constellation Virgo, where she continues, until on the 3rd she enters Libra. On the 5th she passes into Scorpio, traversing Serpentarius and the Milky Way, and entering on the 7th into Sagittarius; passing again into the Milky Way and Sagittarius, she enters Capricornus on the 9th; on the 11th she enters Aquarius; on the 13th, Pisces, where she continues until on the 16th she passes into Cetus; on the 17th into Aries; on the 18th, into Taurus, and traversing the Milky Way, passes on the 21st into Gemini; on the 23rd, into Cancer; on the 25th, into Leo; on the 27th, into Virgo; and on the 30th, into Libra.

She is above the horizon when the Sun is below, during the morning hours till the 11th, and after the 29th; during the evening hours till the 5th, and after the 22nd.

She is near Jupiter on the 4th; Uranus and Mercury on the 17th; Saturn on the 17th; Venus on the 23rd; Mars on the 25th; and Jupiter on the 31st.

She is on the Equator on the 1st; at her greatest south declination on the 7th; crosses the Equator on the 15th; reaches her extreme north declination on the 22nd; and is a third time on the Equator on the 29th.

MERCURY is in the constellation Aries throughout the month. He sets before the Sun throughout the month, and rises before the Sun on the 1st at 4h. 26m.; on the 16th, at 3h. 42m.; and on the last day at 3h. 8m.; the time on the 1st day precedes that of the Sun by 10 minutes; this interval increases till on the 17th the planet rises half an hour before the Sun, and on the last day three quarters of an hour; the only periods during this month in which the planet can be seen are during the last few mornings of the month, at a little before sunrise. He rises near the E.N.E. about the beginning, midway between the E.N.E. and E. by N. at about the middle; and again near the E.N.E. towards the end of the month. He is moving westward among the stars till the 11th; he is stationary among them on the 12th; and moves eastward after that date. He is near Saturn on the 1st; near Uranus on the 10th; is in Aphelion on the 12th; again near Uranus on the 15th; is near the Moon on the 17th; a second time near Saturn on the 26th; and at his greatest western elongation on the 27th. For his path in the heavens, and relative position to the neighbouring stars, see diagram in next month.

VENUS is in the constellation Taurus till the 3rd, and in Gemini till the end of the month. She is an evening star throughout the month, and shines with brilliancy; she sets on the 1st at 11h. 45m. P.M; on the 12th, at 11h. 51m. P.M; on the 21st, at 11h. 45m. P.M.; and on the last day at 11h. 31m. P.M. She is near the N.W. at the beginning, and near the N.W. by W. at the end of the month; she is moving slowly eastward among the stars towards Castor, and is near Castor and Pollux towards the end of the month; she is at her greatest elongation on the 12th, and is near the Moon on the 23rd. For her path in the heavens see the diagram in March.

MARS is in the constellation Cancer till the 12th, and in Leo till the end of the month. He is visible till some time after midnight, setting on the 1st at 2h. 6m. A.M., and on the last day at 0h. 35m. A.M., near the N.W. by W. point of the horizon at the beginning of the month, and near the W.N.W. at the end of the month. He is moving eastward among the stars, and directly towards Regulus. He is near the Moon on the 25th. His path in the heavens, and relative position to the large stars, are shown in the diagram in last month.

JUPITER is in the constellation Libra throughout the month. He is visible throughout the greater part of the night, rising on the 1st at 7h. 50m. P.M., and setting on the following morning at 5h. 6m. A.M.; on the last day he rises at 5h. 37m. P.M., and sets about 3h. A.M., rising near the E.S.E., and setting near the W.S.W. points of the horizon. His motion is very slowly westward among the stars; he is near the Moon on the 4th, and again on the 31st; he souths at an altitude of 22° on the 1st, increasing to 23° on the last day. For his path in the heavens see the diagram in August.

JUPITER'S SATELLITES.—Several of the 1st, 2nd, and 3rd satellites are visible.

(*Continued on page* 34.)

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF IMMERSION.

FEBRUARY.

(*Continued from page* 10.)

JUPITER is in the constellation Libra throughout the month. He is a morning star, and rises on the 1st at 1h. 59m. A.M, and on the last day at 0h. 20m. A.M., midway between the E.S.E. and S.E. by E. points of the horizon. He moves very slowly eastward among the stars, and is near the Moon on the 12th. He souths at an altitude of 21½° on the 1st, and of 21° on the last day. For his path among the stars, see the diagram in August.

JUPITER'S SATELLITES.—Several eclipses of the 1st and 2nd satellites are visible.

SATURN is in the constellation Cetus throughout the month. He is an evening star, and sets on the 1st at 11h. 53m. P.M., and on the last day at 10h. 16m. P.M., near the W. by N. point of the horizon. He is moving eastward among the stars, and is near the Moon on the 24th.

URANUS is in the constellation Aries throughout the month. He souths on the 1st at 5h. 11m. A.M., and at 3h. 24m. P.M. on the last day, at an altitude of 50° nearly on the 15th. He sets on the 1st at 13m. after midnight, and sets at 10h. 28m. P.M. on the last day. He is near the Moon on the 24th. He is moving very slowly eastward among the stars.

MARCH.

(*Continued from page* 14.)

JUPITER is in the constellation Libra throughout the month. He rises on the 1st at 0h. 16m. A.M., and on the last day at 9h. 57m. A.M., midway between the E.S.E. and S.E. by E. points of the horizon. He is almost stationary till the 20th, and afterwards moves very slowly westward among the stars, and is near the Moon on the 10th. He souths at an altitude of 21° on the 1st, and of 21½° on the last day. For his path among the stars, see the diagram in August.

JUPITER'S SATELLITES.—Several eclipses of the 1st, 2nd, and 3rd satellites are visible.

SATURN is in the constellation Cetus throughout the month. He is an evening star, and sets on the 1st, at 10h. 13m., and on the last day at 8h. 37m. P.M., midway between the W. by N. and the W.N.W. points of the horizon. He is near Uranus on the 5th, and the Moon on the 23rd.

URANUS is in the constellation Aries throughout the month. He sets on the 1st at 10h. 24m. P.M., and on the last day at 8h. 37m. P.M., near the W.N.W. He is near the Moon on the 23rd.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Aftern.	Mars. Aftern.	Jupiter. Morning.	Saturn. Morning.	Uranus. Morning.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	11 48	3 5	6 12	0 32	11 47	11 33
6	11 19	3 8	6 1	Aftern.	11 30	11 14
11	10 55	3 10	5 50	11 44	11 13	10 55
16	10 38	3 12	5 40	11 21	10 55	10 37
21	10 26	3 12	5 30	10 59	10 35	10 18
26	10 21	3 11	5 20	10 37	10 21	10 0
31	10 22	3 8	5 10	10 16	10 4	9 41

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Re-appear.	2nd Satellite. Dis. D. Re-ap. R.	3rd Satellite. Re-appearance.
d. h. m.	d. h. m.	
16 1 36 A.M.	4 8 20 P.M. D.	12 9 53 P.M.
17 8 5 P.M.	12 1 27 A.M. R.	20 1 51 A.M.
23 3 31 A.M.		
24 9 59 P.M.		
31 11 54 P.M.		

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
94 Virginis	6	3 1 11 A.M.	Bright	N. of 27°
		3 2 10 A.M.	Bright	N.
A Star	6	6 1 21 A.M.	Bright	4° & 69°
		6 2 16 A.M.	Dark	N.
Nu Virginis	4½	27 7 14 P.M.	Bright	14° S. &
		27 7 44 P.M.	Dark	66° N.
80 Virginis	6	29 8 18 P.M.	Bright	N. of 9°
		29 9 27 P.M.	Dark	N.

TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
FULL MOON ...	3	10	23	P.M.
LAST QUARTER...	10	11	23	P.M.
NEW MOON ...	19	3	15	A.M.
FIRST QUARTER	26	3	38	P.M.
PERIGEE ...	2	9	0	P.M.
APOGEE... ...	15	8	0	A.M.
PERIGEE... ...	31	1	0	A.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	2 24	75 42	5 44	63 32	8 51	70 15	15 8	106 19	2 26	77 50	2 11	77 17	22 43	98 59
6	2 16	77 53	6 7	63 24	9 0	70 57	15 6	106 10	2 28	77 38	2 12	77 11	22 43	98 57
11	2 13	79 21	6 29	63 31	9 9	71 43	15 3	106 0	2 31	77 26	2 13	77 6	22 44	98 56
16	2 16	79 49	6 50	63 51	9 18	72 31	15 1	105 49	2 33	77 14	2 14	77 0	22 44	98 54
21	2 26	79 19	7 10	64 24	9 28	73 21	14 58	105 40	2 36	77 03	2 15	76 55	22 44	98 53
26	2 41	78 1	7 28	65 8	9 38	74 15	14 56	105 30	2 38	76 52	2 16	76 50	22 44	98 52
31	3 2	76 5	7 45	66 2	9 48	75 10	14 54	105 22	2 40	76 41	2 17	76 45	22 44	98 51

MAY.

WELL-DRESSING ON HOLY THURSDAY.

One of the prettiest festivals of May is the custom of decorating wells with flowers on Holy Thursday. In the beautiful village of Tissington, in Derbyshire, five springs are thus dressed or flowered every year. That which we have engraved is the Hall Well; named from its being nearest Tissington Hall, the ancestral seat of Sir Henry Fitzherbert, Bart. The decoration usually consists of various flowers, in pleasing devices, inserted in moist clay, upon boards; and each Well bears a scriptural precept, for the custom is a sacred one. It commences with divine service in the church; after which the congregation walk in procession to the Hall Well, where a psalm is read by the clergyman; and some verses, composed for the occasion, are sung, accompanied by music. The ceremony is also performed at the other wells. The villagers in the afternoon entertain their friends at home; and refreshments are served in booths near the churchyard.

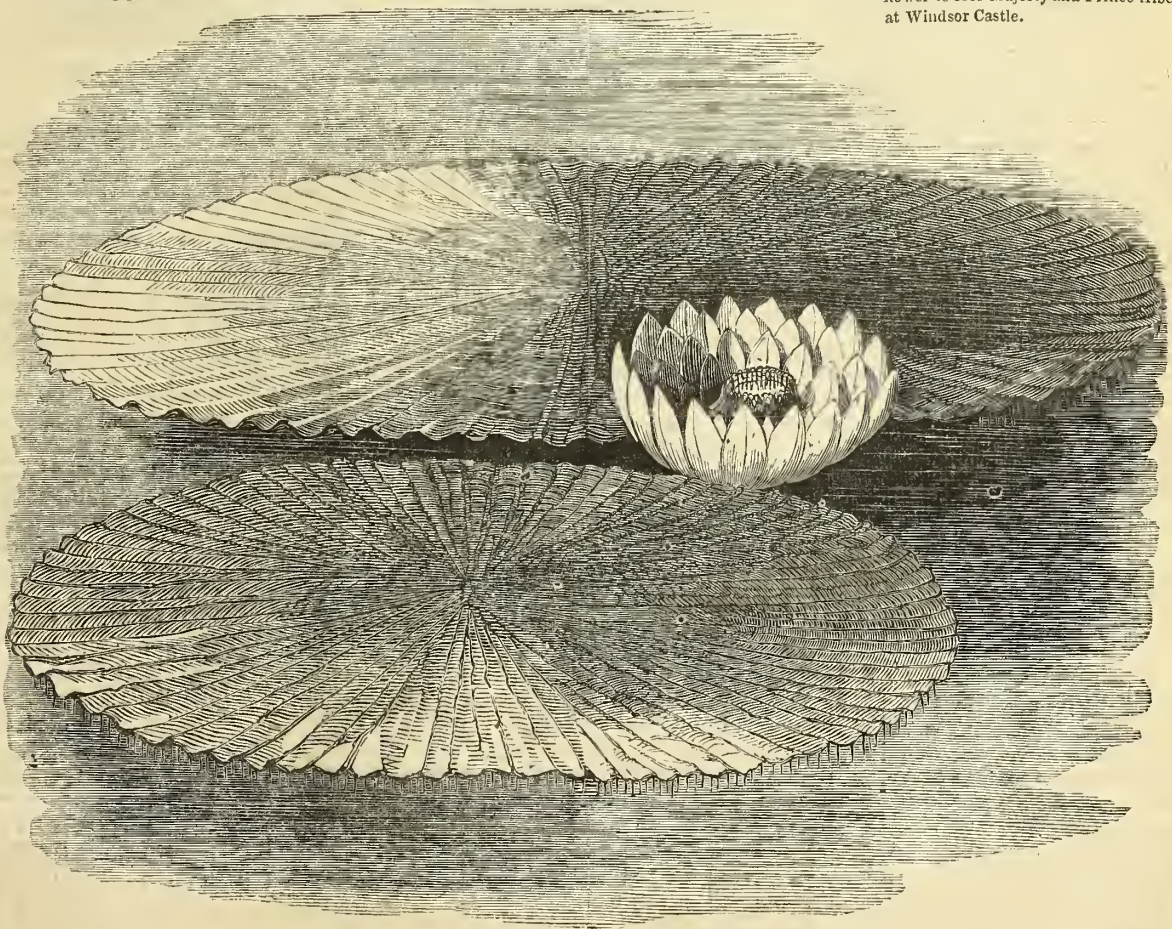
"The massive tablet, graced with sculptured lay,
Awhile holds faithful to its sacred trust,
But Time resistless in its sov'reign sway,
E'er long impels it to the mould'ring dust;
Yet sudden Fate, nor varying Age
The records of th' Almighty's praise
Can e'er o'erwhelm! sacred each page,
Indelible the mystic lays!
Whilst Time, propitious in its circling race,
Each trophied rite sustains with ever-blooming grace."

WELL-DRESSING AT TISSINGTON.

THE VICTORIA REGIA.

This Royal Water Lily is associated with the Great Exhibition Palace in Hyde Park; since it was in constructing rapidly a house for this beautiful aquatic that Sir J. Paxton devised the principle upon which the Crystal Palace was erected. The gigantic flower (originally found in a river of British Guiana) first flowered in England at Chatsworth; and in May, 1851, a fine specimen flowered in the open air at King's Road, Chelsea, at the nursery of Messrs. Weeks. A leaf of only five days' growth is five feet in diameter: "the under side presents a beautiful example of natural engineering in the cantilevers, which radiate from the centre, with large bottom flanges, and very thin middle-ribs, between each pair of which are cross-girders, to keep the ribs from buckling; their depth gradually decreasing towards the circumference of the leaf, where they also ramify." Upon this "natural engineering," Sir J. Paxton assures us that he first devised the self-supporting principle, which he has applied in the roof of the Great Building in Hyde Park.

The largest leaves of the plant measure fourteen feet in circumference; they are able to sustain astonishing weights; a young lady placed upon one, at Chatsworth, was borne up for sometime with safety. The first flower-bud appeared at Chatsworth, Nov. 1, 1849: and a few days after Sir J. Paxton presented a leaf and flower to Her Majesty and Prince Albert, at Windsor Castle.



THE VICTORIA REGIA IN FLOWER.

JUNE, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Aftern.	MOON. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Tu	Whit T. *Nicomede*	3 52	2 28	60½	8 5	7 14	11 43	18¾	3 31		13		0 45	1 10	153
2	W	Ember W. Ox. T. b.	3 51	2 19	60¾	8 5	8 33	Morning.		4 5		●		1 35	2 0	154
3	Th	No real night	3 50	2 9	61	8 6	9 45	0 42	15¾	4 45		15		2 25	2 50	155
4	F	Arcturus souths 9h 15m, at an altitude of 57° 28′	3 49	1 59	61	8 7	10 43	1 42	14½	5 38		16		3 10	3 35	156
5	S	K. of Han. b. 1771	3 49	1 49	61	8 8	11 27	2 40	14¾	6 40		17		3 55	4 20	157
6	☽	Trinity S. [*Bonif.*	3 48	1 38	61¼	8 8	Morning.	3 35	16¼	7 47		18		4 40	5 0	158
7	M	Epsilon Boötis souths 9h 33m, at an alt. of 66° 13′	3 47	1 27	61¼	8 9	0 2	4 26	19¼	8 57		19		5 25	5 50	159
8	Tu	Beta Libræ souths at 10h, at an alt. of 29° 41′	3 47	1 16	61½	8 10	0 29	5 14	22¾	10 8		20		6 10	6 40	160
9	W	Alpha Coronæ Borealis sths. at 10h 15m, alt. 65° 44′	3 46	1 5	61½	8 11	0 51	5 58	27	11 16		☾		7 0	7 30	161
10	Th	*Corpus Christii*	3 46	0 53	61½	8 12	1 10	6 41	31½	Aftern.		22		8 0	8 30	162
11	F	*St. Barnabas*	3 46	0 41	61½	8 13	1 26	7 22	36½	1 30		23		9 5	9 40	163
12	S	Trinity T. ends	3 46	0 29	61¾	8 13	1 42	8 2	41¼	2 34		24		10 10	10 35	164
13	☽	1st S. aft. Trin.	3 45	0 16	61¾	8 14	2 0	8 44	46	3 42		25		11 10	11 35	165
14	M	Venus at greatest brilliancy	3 45	0 4	61¾	8 14	2 19	9 26	50½	4 47		26		No Tide.	At Noon.	166
15	Tu	Antares souths 10h 43m, at an altitude of 12° 25′	3 45	Aft. 12 o'clock.	61¾	8 15	2 40	10 11	54½	5 57		27		0 25	0 45	167
16	W	Length of day 16h 30m	3 45	0 22	61¾	8 15	3 6	10 59	57¾	7 4		28		1 5	1 25	168
17	Th	*St. Alban.* Sun ecl., inv. at Greenw.	3 45	0 35	62	8 16	3 40	11 50	60	8 11		○		1 45	2 5	169
18	F	Beta Scorpii souths 10h 8m, at an altitude of 19° 7′	3 45	0 48	62	8 17	4 21	Aftern.	61¼	9 9		1		2 20	2 40	170
19	S	[Qu. Vic. acc.	3 45	1 1	62	8 17	5 14	1 39	61	10 1		2		3 0	3 20	171
20	☽	2nd S. aft. Trin.	3 45	1 14	62	8 17	6 16	2 34	59½	10 42		3		3 40	4 0	172
21	M	Q. Vic. proc. 1837	3 45	1 27	62	8 17	7 29	3 29	56½	11 15		4		4 15	4 40	173
22	Tu	Mars in conjunction with the Moon at 7h 43m P.M.	3 46	1 40	62	8 18	8 44	4 21	52½	11 41		5		5 0	5 20	174
23	W	Length of day 16h 32m	3 46	1 53	62	8 18	10 5	5 13	47½	Morning.		6		5 45	6 10	175
24	Th	*St. J. Bap.* Mids. D	3 46	2 6	62	8 18	11 24	6 3	42	0 6		☽		6 35	7 5	176
25	F	Length of night 7h 29m	3 47	2 19	62	8 18	Aftern.	6 53	36	0 27		8		7 35	8 5	177
26	S	Twilight throughout England	3 47	2 31	61¾	8 18	2 6	7 43	30¼	0 47		9		8 40	9 20	178
27	☽	3rd S. aft. Trin.	3 47	2 44	61¾	8 18	3 29	8 36	25	1 8		10		9 50	10 20	179
28	M	Q. Vic. cr. 1838	3 48	2 56	61¾	8 18	4 50	9 30	20¼	1 31		11		10 50	11 25	180
29	Tu	*St. Peter.* Venus stationary.	3 49	3 8	61¾	8 17	6 10	10 27	17	2 0		12		11 55	No Tide.	181
30	W	Day has shortened 4m	3 49	3 20	61¾	8 17	7 25	11 26	14¾	2 37		13		0 25	0 55	182

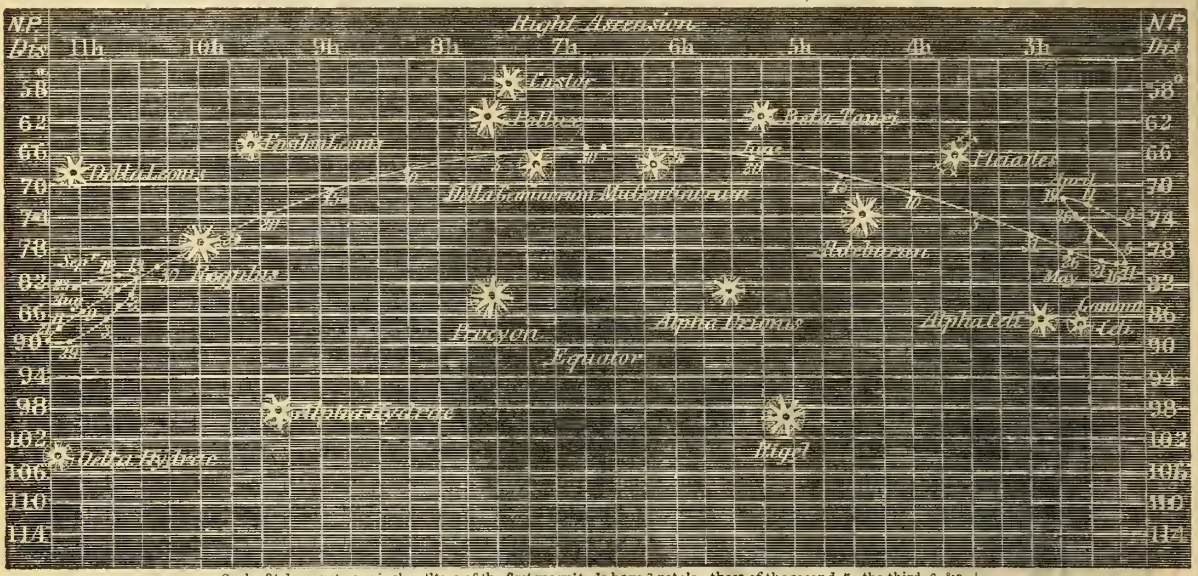
JUNE.

WOULDST thou have shade, love? It were hard to seek,
While these fierce rays descend in fiery shower;
Garden and pleasaunce, alley, arbour, bower
To screen thee now, were impotent and weak.
But come! in yonder isle there lies a creek,
Thick over-laced with densest boughs, where light,
Softened to sadness, steals upon the sight—
Fit for the cell of some fair novice meek.
The stream is crystal, and within its breast
Bright golden fishes gleam, and vanish, where
The water-lilies, with their trustful leaves,
Make gentle plashings, rocked in faint -t.
As dreaming of some motion; song-birds rare
Love the pavilion's green and sheltering eaves. B.

REE ING with spice, by handmaid gales distill'd,
What time the heats in solar conclave meet,
Bright June arrives—her earliest task fulfill'd,
The Earth, rose-clad, lies blushing at her feet.
To gilded fruits the milky germ gives place;
She breathes, and forth spontaneous 'mong the boughs
A pageant burns reflected from her face;
While all the land a kindling bloom endows.
Pendent the bell; and where fresh waters leap,
Her rainbow-colour'd stars gay Flora opes:
On scorching heaths the unctuous vipers creep;
Below, sweet smell the wolds and new-mown slopes.
And now, while glades with cushat songs invite,
Summer exults in all her warm delight. K.

JUNE.

THE PATH OF MERCURY FROM APRIL 6 TILL SEPTEMBER 23, 1852.



Scale, 24 degrees to one inch. Stars of the first magnitude have 8 petals; those of the second, 7; the third, 6. &c.

THE SUN is situated north of the Equator, and reaches his extreme north declination on the 21st. He is in the sign Gemini (the Twins) till the 21st, having been in that sign 31 days, 8 hours, 33 minutes. On the 21st, at 7h. 29m. A.M., he enters that of Cancer (the Crab,) and Summer commences. His distance from the Earth on the first day is 96,380,000 miles. He rises at the beginning of the month at 2° N. of N.E. by N., and about the 20th, at about 5° N. of the same point; and sets at the same distances respectively N. of N.W. by N. on the same days. His meridian altitude, as well as his time of passing the meridian, are shown daily in the Calendar pages. On June 17, there will be an Eclipse of the Sun: it will not be visible here, but will be visible from the southern part of South America.

On the 1st, the Moon enters the constellation Scorpio, and passes through Serpentarius and the Milky Way, entering on the 3rd into Sagittarius; she re-enters the Milky Way, and passes on the 5th into Capricornus; on the 7th into Aquarius; on the 9th, into Pisces; on the 18th, into Cetus; on the 12th, into Pisces again, and on the 13th, enters Aries, having again passed through Cetus; on the 14th, she passes into Taurus; on the 17th and 18th, crosses the Milky Way and Gemini, and on the 19th enters Cancer; on the 22nd, she passes into Leo; on the 23rd, into the constellation Virgo, where she remains until the 26th, when she re-enters Libra; on the 28th, she is in Scorpio; on the 29th, in Serpentarius; on the 30th, in Sagittarius, and on the 31st enters the Milky Way.

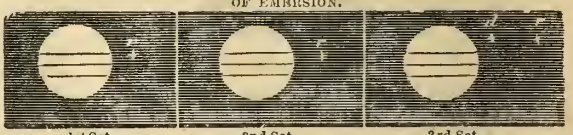
She is above the horizon when the Sun is below, during the morning hours till the 12th, and after the 29th; and during the evening hours till the 3rd, and after the 20th. She is near Uranus on the 13th; Saturn on the 14th; Mercury on the 16th; Venus on the 20th; Mars on the 22nd; and Jupiter on the 27th.

She is near Uranus on the 13th; Saturn on the 14th; Mercury on the 16th; Venus on the 20th; Mars on the 22nd; and Jupiter on the 27th.

She is at her extreme south declination on the 4th; crosses the Equator on the 11th; reaches her greatest north declination on the 18th; crosses the Equator a second time on the 25th, going south.

MERCURY is in the constellation Aries till the 4th; is in Taurus till the 24th, and in Gemini till the end of the month. He sets before the Sun till towards the end of the month, and rises before him during this month. He rises on the 1st at 3h. 4m. A.M.; on the 10th, at 2h. 56m.; on the 16th at 2h. 57m.; and on the last day at 3h. 44m. His times of rising precede those of the Sun—on the 1st by 6m., increasing to 50m. by the 10th, and decreasing to 3m. only on the last day. Therefore, the planet is moderately favourable for observation during the hour preceding sunrise at the early part of this month. He rises in the commencement near the E.N.E.; during the middle of the month at the N.E. by E., and 4° north of this point, towards the end of the month. He is moving eastward among the stars, and is situated nearly midway between Aldebaran and the Pleiades on the 11th; is near Beta Tauri on the 20th; is near the Moon on the 16th, and in superior conjunction with the Sun on the 29th. For his path in the heavens, and relative position to the stars, see the above diagram.

RELATIVE POSITION OF EACH SATELLITE TO JUPITER AT THE TIME OF EMERSION.



1st Sat. 2nd Sat. 3rd Sat.

VENUS is in the constellation Cancer throughout the month. She shines with great brilliancy as an evening star, and sets on the 1st at 11h. 27m.; on the 15th, at 10h. 46m., and on the last day at 11h. 37m.; she is 2° N. of N.W. by W. at the beginning of the month; at that point about the middle; she is moving eastward till the 27th, and is stationary amongst the stars from the 28th; and she is near the Moon on the 20th.

MARS is in the constellation Leo, till the 19th, and in Virgo till the end of the month; he is an evening star, and sets on the 1st at 0h. 38m. A.M., and on the last day at 11h. 1m. P.M., near the W.N.W. point of the horizon, at the beginning of the month, and near the W. by N. at the end of the month. He is moving eastward among the stars—is very near Regulus on the 11th, and the Moon on the 22nd. His path in the heavens, and relative position to the large stars near him, are shown in the diagram in April.

(*Continued on page* 54.)

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Aftern.	Mars. Aftern.	Jupiter. Aftern.	Saturn. Morning.	Uranus. Morning.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	10 22	3 8	5 8	10 11	10 0	9 37
6	10 29	3 2	4 59	9 50	9 43	9 18
11	10 41	2 55	4 49	9 28	9 22	8 56
16	10 58	2 45	4 40	9 7	9 4	8 37
21	11 21	2 33	4 30	8 46	8 50	8 22
26	11 48	2 16	4 21	8 25	8 52	8 3
30	Aftern.	2 1	4 14	8 9	8 18	7 48

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Reappear.	2nd Satellite. Re-appear.	3rd Satellite.
d. h. m.	d. h. m.	d. h. m.
8 1 48 A.M.	5 10 31 P.M.	24 9 46 P.M.
9 8 17 P.M.	13 1 8 A.M.	
16 10 11 P.M.		
24 0 6 A.M.		

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
26 Sagittarii	6	4 1 31 A.M.	Bright	7° & 66°
		4 2 28 A.M.	Dark	N.
A Star	6	29 8 27 P.M.	Bright	2° & 69°
		29 9 26 P.M.	Dark	N.

TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
FULL MOON ...	2	6	26	A.M.
LAST QUARTER	9	3	15	P.M.
NEW MOON ...	17	4	47	P.M.
FIRST QUARTER	24	8	47	P.M.
APOGEE... ...	12	0	0	A.M.
PERIGEE... ...	27	1	0	P.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	3 7	75 38	7 48	66 14	9 50	75 22	14 53	105 20	2 41	76 39	2 17	76 44	22 44	98 51
6	3 34	73 15	8 3	67 16	10 0	76 20	14 51	105 13	2 43	76 29	2 18	76 39	22 44	98 51
11	4 7	70 42	8 16	68 24	10 14	77 21	14 50	105 6	2 45	76 20	2 19	76 35	22 45	98 51
16	4 46	68 19	8 25	69 34	10 20	78 24	14 48	105 0	2 47	76 11	2 20	76 30	22 45	98 51
21	5 30	66 27	8 32	70 43	10 30	72 29	14 47	104 56	2 49	76 2	2 21	76 26	22 45	98 52
26	6 17	65 32	8 36	71 50	10 49	70 36	14 46	104 53	2 51	75 54	2 22	76 23	22 45	98 53
30	9 46	65 32	8 36	72 40	10 49	71 31	14 45	104 52	2 53	75 47	2 22	76 20	22 44	98 54

JUNE.

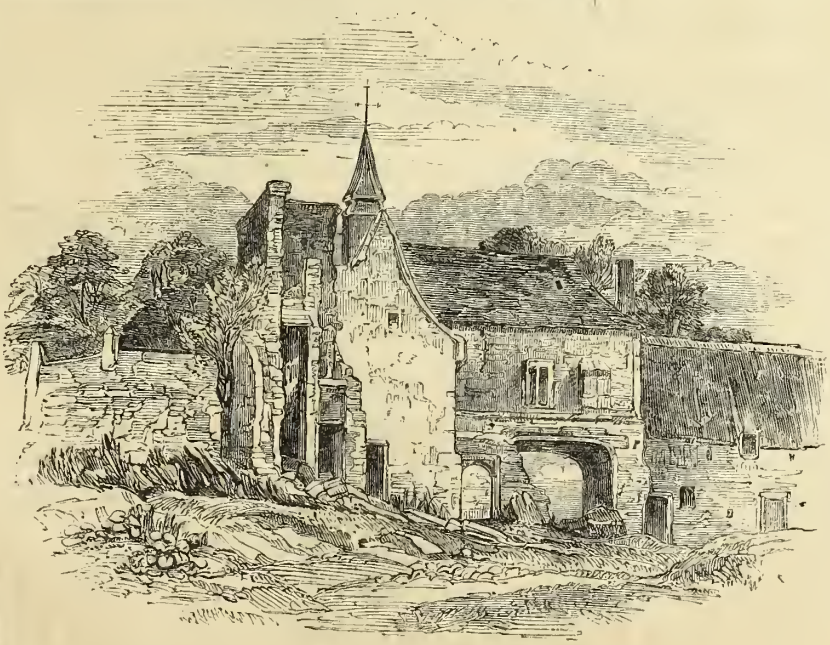
THE POET CAMPBELL, DIED JUNE 15, 1844.

THOMAS CAMPBELL, whose poetry is known wherever the English language is spoken, and admired wherever it is known, was born at Glasgow in 1777, and wrote verse in his boyhood. In Argyleshire, among the romantic mountains of the north, his poetic spirit increased, and the charms of verse took entire possession of his mind; and there he wandered alone by the torrent, or on the rugged height, reciting the strains of other poets aloud, or silently composing his own. At the age of twenty-one, he produced his celebrated "Pleasures of Hope," which, for twenty years, realized the publishers between £200 and £300 per annum, although the poet received at first but £10 for the copyright. He wrote his "Battle of Hohenlinden" immediately after witnessing the contest from a convent wall. He soon afterwards composed those two marine odes, "The Battle of the Baltic," and "Ye Mariners of England;" and though, as Byron lamented, Campbell wrote so little, these odes are enough to place him unforgotten in the Shrine of the Muses.

THE REV. ROWLAND HILL'S FIRST SERMON AT WOTTON-UNDER-EDGE, JUNE 16, 1771.

WITHIN the past year has been taken down the "Tabernacle" at Wotton-under-Edge, Gloucestershire, which was built by Rowland Hill, shortly after his ordination to deacon's orders in 1773. For several years prior to that period, Mr. Hill had been engaged in itinerant preaching, and had made some evangelizing tours through Gloucestershire. The hills, woods, and vales had then been the scene of his addresses to the thousands who assembled to hear the "baronet's son." His first public service at Wotton is thus mentioned in his diary:—"June 16, 1771, Sunday eve. Wotton-under-Edge: a fresh place: the first sermon amongst them: they behaved with remarkable attention, and stood in great crowds under the market place, while I spoke to them from Ephes. v. 14." Mr. Hill built here a country residence, with a chapel for the free use of the poor; facing it is an amphitheatre of hills, clothed with hanging beech woods. Robert Hall, when visiting Mr. Hill there, once said to him, "This is the most Paradisaical place, sir, I was ever in." Mr. Hill spent a portion of each year at Wotton for more than half a century, at which times he officiated as the minister of the congregation at the Tabernacle. In 1832, but a few months prior to his decease, Mr. Hill paid his last visit to Wotton-under-Edge.

ROWLAND HILL'S TABERNACLE, AT WOTTON-UNDER-EDGE.



THE CHATEAU OF HOUGOUMONT, ON THE FIELD OF WATERLOO.

BATTLE OF WATERLOO, JUNE 18, 1815.

THE picturesque château of Hougoumont, or Goumont, about three-quarters of a mile from La Haye Sainte, is decidedly the most interesting spot in the Field of Waterloo, not only for its importance in the history of the battle, but because it still exhibits marks of the dreadful conflict. It is an old-fashioned Flemish house, surrounded by strong walls, which the Duke himself caused to be further fortified by breaking loopholes in them, through which was directed the fire of musketry. The orchard and garden were several times in the possession of the French, but they never succeeded in forcing the inclosures which surrounded the house. This little citadel, though set on fire by the howitzers, and almost gutted by the flames, was bravely and judiciously maintained to the very last by the Coldstream Guards. The autographs of Byron, Southey, and Wordsworth, were once to be discovered among the names which cover the walls.

JULY, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Height above horizon	SUN. Sets.	MOON. Rises.	MOON. Souths. Morning	MOON. Height above horizon	MOON. Sets.	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	Th	Moon eclipsed, invisible at Greenwich	3 50	3 31	61½	8 17	8 31	....	..	3 25		1 20	1 45	183
2	F	*Visit. B. V. Mary*	3 50	3 42	61½	8 17	9 20	0 25	14¼	4 21		2 10	2 40	184
3	S	Dog days begin	3 51	3 53	61½	8 16	10 1	1 21	15½	5 27		3 0	3 25	185
4	☉	4TH S. aft. TRIN.	3 52	4 4	61¼	8 15	10 31	2 15	17¾	6 37		3 45	4 5	186
5	M	[*Trans. St. Mark*	3 53	4 14	61¼	8 14	10 55	3 5	21	7 48		4 25	4 45	187
6	Tu	O. Mds. D. Ox. Act	3 54	4 25	61¼	8 14	11 14	3 52	25¼	8 59		5 5	5 25	188
7	W	*T. à Becket* [&C. C	3 55	4 34	61	8 13	11 31	4 35	25¾	10 7		5 50	6 5	189
8	Th	Fire Insur. due	3 56	4 44	61	8 13	11 49	5 17	34½	11 14		6 30	6 50	190
9	F	Cam. Term ends	3 57	4 53	60¾	8 12	Morning.	5 58	39¼	Aftern.		7 15	7 35	191
10	S	Jupiter stationary at 10h 20m P.M.	3 58	5 1	60¾	8 12	0 6	6 39	44	1 26		8 0	8 30	192
11	☉	5TH S. aft. TRIN.	3 59	5 9	60½	8 11	0 23	7 21	48¾	2 33		9 0	9 35	193
12	M	*B. Boyne*, 1690	4 0	5 17	60½	8 11	0 45	8 5	52¾	3 41		10 0	10 35	194
13	Tu	Alpha Herculis souths 9h 41m, at an alt. of 53° 5′	4 1	5 24	60¼	8 10	1 6	8 51	56½	4 49		11 5	11 35	195
14	W	Alpha Ophiuchi sths. 9h 57m	4 2	5 31	60¼	8 9	1 37	9 41	59¼	5 55		No Tide.	0 5	196
15	Th	*St. Swithin*	4 3	5 38	60	8 9	2 14	10 34	61	6 58		0 30	0 55	197
16	F	Length of day 16h 4m	4 4	5 43	59¾	8 8	3 4	11 29	61¼	7 53		1 15	1 40	198
17	S	Day decreased 30m	4 5	5 49	59¾	8 7	4 3	Aftern.	60¼	8 39		2 0	2 25	199
18	☉	6TH S. aft. TRIN.	4 6	5 54	59½	8 6	5 13	1 22	57¾	9 16		2 45	3 5	200
19	M	Alpha Lyræ souths 10° 41′, at an altitude of 77° 10′	4 7	5 58	59¼	8 5	6 31	2 16	54	9 46		3 25	3 45	201
20	Tu	*Margaret*	4 8	6 2	59¼	8 3	7 51	3 9	49	10 10		4 5	4 25	202
21	W	Gamma Aquilæ souths 11h 40m, at an alt. of 48° 47′	4 9	6 5	59	8 2	9 12	4 0	43½	10 33		4 45	5 10	203
22	Th	*Magdalene*	4 11	6 7	58¾	8 0	10 31	4 50	37¾	10 52		5 35	5 55	204
23	F	Gibralt. tak. 1704	4 12	6 9	58½	7 59	11 53	5 40	32	11 13		6 20	6 45	205
24	S	Mars in conjunction with Beta Virginis 9h 29m P.M.	4 13	6 11	58¼	7 57	Aftern.	6 32	26½	11 36		7 10	7 40	206
25	☉	7TH S. aft. TRIN.	4 15	6 12	58	7 56	2 36	7 24	21¾	Morning.		8 10	8 40	207
26	M	*St. Anne* [*St. Jas.*	4 16	6 12	57¾	7 54	3 56	8 19	18	0 2		9 20	9 50	208
27	Tu	Length of day 15h 35m	4 18	6 11	57½	7 53	5 10	9 16	15½	0 35		10 25	11 5	209
28	W	Length of night 8h 28m	4 19	6 10	57½	7 51	6 17	10 13	14¼	1 17		11 40	No Tide	210
29	Th	Alpha Aquilæ souths 11h 13m, at an alt. of 47°	4 21	6 9	57¼	7 50	7 13	11 10	15½	2 7		0 15	0 45	211
30	F	Alpha Cygni souths 0h 1m A.M. at an alt. of 83° 16′	4 23	6 6	57	7 48	7 57	Morning.	16½	3 11		1 15	1 45	212
31	S	Uranus in quadrature with the Sun	4 24	6 3	56¾	7 46	8 30	0 5	19½	4 19		2 6	2 30	213

DURATION OF MOONLIGHT.

Before Sunrise. O'Clock. 1h. 2h. 3h. — After Sunset. O'Clock. 9h. 10h. 11h.

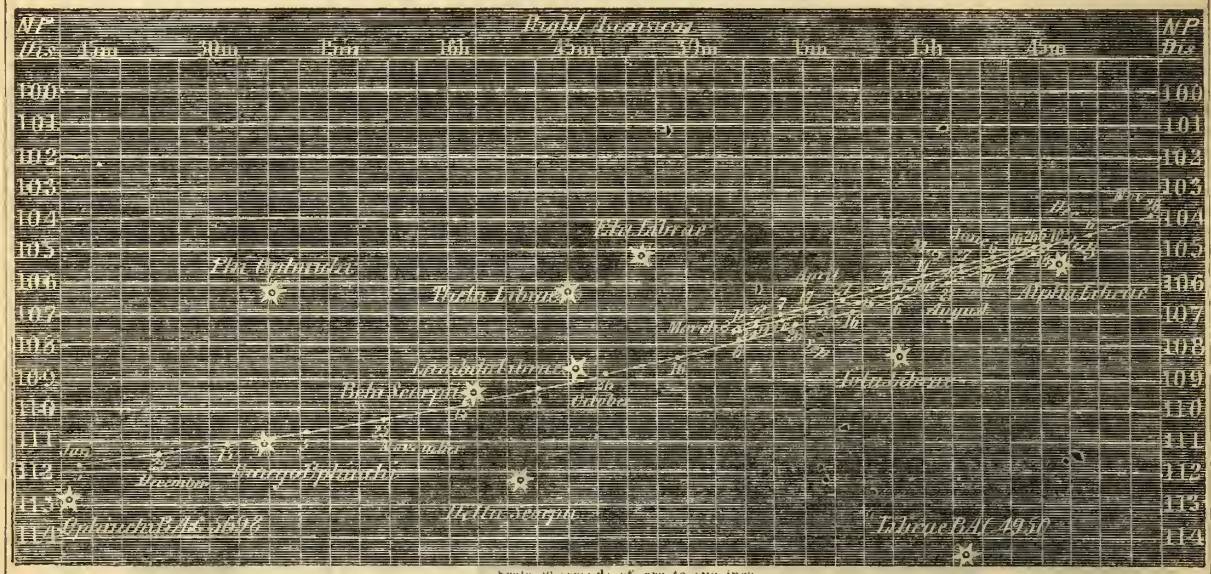
JULY.

WHERE is the song of birds? It rises not
Around us, when in silence we are laid
Beneath the arching chestnut's pleasant shade;
Nor when at noon, forgetting and forgot,
We watch the fount in yon old ruined grot;
Nor when at eve we mark the weary bee
Seeking his perfumed cell; nor when we see
Morning once more smile on our quiet cot.
I had forgotten—joy, too deep for song,
Hath made them dumb—those little ones, you know,
Who, nestling to their sides, to strength have grown,
Have kept them from our concert-halls so long.
Well, sister, as our minstrels use us so,
We needs must dance to music of our own. B.

'MID beams and rains alternate flashing now,
July, the ripe, luxuriant month, we hail!—
Queen of the season, by each jewell'd bough
That yields for her its riches to the gale:
Cherries the sweetest, currants crystal red,
Or moonlight-hued, or ebon black display'd.
We know her come by all the tokens spread:—
The swelling apple, and the fig-tree's shade;
By poppies burning 'midst the fields of grain;
The fox-glove's purple, and the pale wan flower
That smiles unto the stars, and shuts again
Ere morn; and by the gold of noontide hour;
By all the rills that tinkled songs to May;
And now for flowers can scarce see night from day! K.

JULY.

SUCCESSIVE TELESCOPIC APPEARANCES OF VENUS DURING 1852.



Scale, 10 seconds of arc to one inch.

THE SUN is situated north of the Equator, and is moving southward. On the 22nd, at 6h. 25m. P.M., he enters Leo (the Lion), having been in the Crab 31 days 10 hours 56 minutes. His distance from the Earth on the 1st day is 96,592,000 miles, being at his greatest distance during the year. On the 1st he rises near 3° N. of N.E. by N.; on the 18th, at N.E. by N.; and towards the end of the month, at nearly the same place as at the beginning of the month. His time of southing, in common clock time, and his height in degrees at the same time, are shown daily in the Calendar pages.

On the 1st the MOON enters the constellation Sagittarius; on the 2nd, Capricornus; and on the 4th, Aquarius; on the 6th she enters Pisces; on the 7th Cetus, where she remains until the 9th, when she enters Pisces: she passes on the 10th again into Cetus; on the 11th, into Aries; on the 12th, into Taurus; on the 15th, into Gemini, and, crossing the Milky Way, enters on the 17th into Cancer; on the 18th she is in Leo; on the 21st, in Virgo; on the 24th, in Libra; on the 26th, in Scorpio; on the 26th, in Serpentarius, passes through the Milky Way, and on the 28th enters Sagittarius; on the 28th re-enters the Milky Way; on the 30th passes into Capricornus, and on the 31st into Aquarius.

She is above the horizon when the Sun is below, during the morning hours, till the 14th, and after the 29th; and during the evening hours, till the 2nd, and after the 20th.

She is near Uranus on the 10th; Saturn on the 11th; Venus on the 17th; Mercury on the 18th; Mars on the 21st; and Jupiter on the 24th.

On July 1st there is a total eclipse of the Moon, but which is invisible here. It commences at 1h. 37m. P.M.; the middle of the eclipse is at 3h. 16m. P.M.; and it ends at 5h. 14m. P.M.

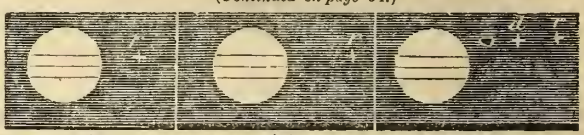
She is at her extreme south declination on the 1st; crosses the Equator on the 8th; reaches her extreme north declination on the 15th; again crosses the Equator on the 22nd; and a second time reaches her extreme south declination on the 29th.

MERCURY is in the constellation Gemini till the 7th; in Cancer till the 17th; and in Leo till the end of the month. He rises after the Sun through the month, and sets after him on the 1st, at 8h. 38m; on the 6th, at 8h. 23m.; on the 12th, at 8h. 2m.; on the 18th, at 7h. 18m.; on the 24th, at 7h. 8m.; and on the last day, at 6h. 39m. These times are 23 minutes after sunset on the 1st, increasing gradually to 1h. 5m. on the 18th, and decreasing to 55m. on the last day. Therefore the planet is rather favourably situated for observation by the naked eye, during the greater part of this month, at the commencement of which he sets midway between the N.W. and N.W. by W. points of the horizon; on the 10th, he sets at the N.W. by W.; and on the 24th, at the W.N.W. points of the horizon. He is moving eastward among the stars throughout the month, and is situated very near Regulus on the 26th; is near Venus on the 11th, and the Moon on the 18th. For his path in the heavens, and relative position to the neighbouring stars, see diagram in June.

VENUS is in the constellation Cancer throughout the month. She is an evening star till the middle of the month, and sets before the Sun from the 15th, and rises before him from the 25th. She sets near the W.N.W. throughout the month, and rises at the E.N.E. point of the horizon at the end of the month. She is moving very slowly northward among the stars throughout the month, being at the end situated almost midway between Procyon and Pollux; is near the Moon on the 17th; is in inferior conjunction with the Sun on the 21st; and in Aphelion on the 28th.

MARS is in the constellation Leo till the 19th, and in Virgo till the end of the month. He is an evening star, and sets on the 1st at 10h. 58m. P.M., and on the last day at 9h. 31m. P.M; near the W. by N. point of the horizon at the beginning, and near the W. point near the end of the month. He is moving eastward among the stars towards Spica Virginis, and is near the Moon on the 21st. His path in the heavens, and relative position to the large stars near him, are shown in the diagram in April.

(*Continued on page 54.*)



1st Sat. 2nd Sat. 3rd Sat.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury Aftern.	Venus. Aftern.	Mars. Aftern.	Jupiter. Aftern.	Saturn. Morning.	Uranus. Morning.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	0 17	1 56	4 12	8 5	8 15	7 44
6	0 43	1 32	4 3	7 45	7 57	7 25
11	1 5	1 4	3 54	7 25	7 35	7 6
16	1 22	0 33	3 45	7 6	7 21	6 47
21	1 35	Morn.	3 37	6 47	7 2	6 28
26	1 43	11 28	3 28	6 28	6 44	6 8
31	1 48	10 58	3 19	6 9	6 25	5 49

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Disappearance.	2nd Satellite. Re-appearance.
d. h. m.	d. h. m.
2 8 29 P.M.	7 10 16 P.M.
9 10 24 P.M.	
25 8 42 P.M.	

3rd Satellite. Disappearance.
1 11 46 P.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
27 Capricorni	6	3 11 52 P.M.	Bright	34° & 69°
		4 0 57 A.M.	Dark	N.
29 Aquarii	6	5 9 8 A.M.	Bright	11° & 72°
		5 1 16 A.M.	Dark	N.
17 Capricorni	6	30 10 16 P.M.	Bright	20° & 68°
		30 11 34 P.M.	Bright	N.

TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
FULL MOON ...	1	3	28	P.M.
LAST QUARTER...	9	8	6	A.M.
NEW MOON ...	17	4	15	A.M.
FIRST QUARTER	24	1	2	A.M.
FULL MOON ...	31	2	12	A.M.
APOGEE	9	7	0	P.M.
PERIGEE... ...	22	6	0	P.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

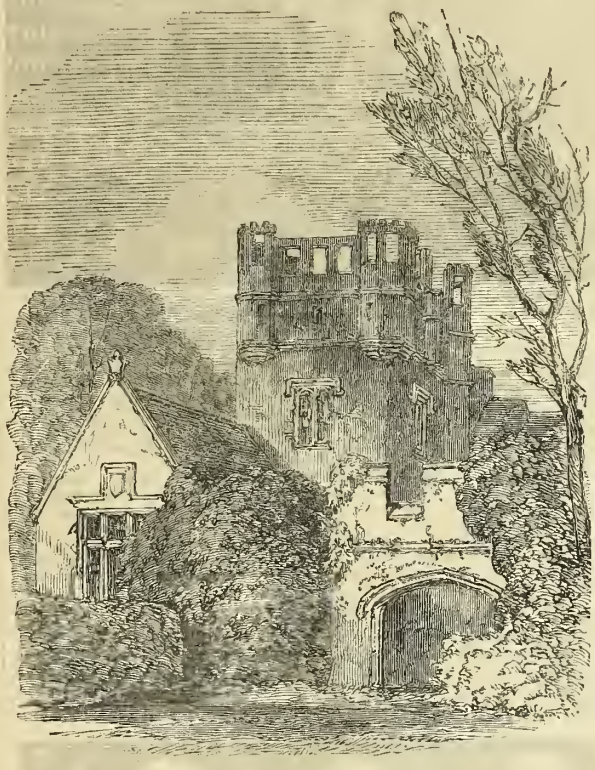
Day of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	6 55	65 37	8 35	72 51	10 52	81 44	14 45	104 51	2 56	75 47	2 22	76 20	22 44	98 54
6	7 41	66 44	8 31	73 45	11 2	82 55	14 45	104 51	2 55	75 40	2 23	76 17	22 44	98 55
11	8 23	68 44	8 22	74 28	11 11	84 7	14 45	104 52	2 57	75 34	2 24	76 14	22 44	98 57
16	9 0	71 20	8 11	74 59	11 24	85 20	14 45	104 54	2 58	75 28	2 24	76 12	22 44	98 59
21	9 33	74 17	7 55	75 21	11 38	86 35	14 45	104 58	2 59	75 23	2 24	76 10	22 45	99 1
26	10 1	77 24	7 43	75 26	11 46	87 51	14 46	105 3	3 1	75 19	2 25	76 8	22 43	99 3
31	10 25	80 31	7 35	75 22	11 57	89 8	14 47	105 9	3 2	75 16	2 25	76 7	22 42	99 6

JULY.

MATTHEW PRIOR, BORN JULY 21, 1644.

This accomplished poet enjoyed worldly prosperity and importance such as rarely fall to the lot of the sons of song. Prior's father died early, and Matthew was brought up by his uncle, a vintner, at Charing-cross, who sent him to Westminster School. He was afterwards taken home to assist in the business of the inn, where he was one day seen by the Earl of Dorset *reading Horace*. The Earl generously sent Matthew to St. John's College, Cambridge, where he soon distinguished himself in his academical career; and his Lordship subsequently introduced Prior into life, obtained for him a diplomatic appointment, and thus laid the foundation of his fortune. Prior wrote odes, songs, epistles, epigrams, and tales, with charming ease, and with the colloquial humour of his master, Horace. The accompanying marble bust of Prior is one of the best works of Roubiliac, is most delicately chiselled, and is full of characteristic expression. It was purchased at Stowe, in 1848, by the late Sir Robert Peel, for £136 10*s*., whose collection already contained a companion bust of Pope.

BUST OF THE POET PRIOR, BY ROUBILIAC.



MORTHAM TOWER, YORKSHIRE.

SCENERY OF SCOTT'S "ROKEBY."

The scene of Scott's poem is partly laid at Rokeby, near Greta Bridge, in Yorkshire; and the date of the supposed events is immediately subsequent to the great battle of Marston Moor, July 3, 1644. The accompanying illustrations show two of the most picturesque localities in the poem. First is the Castle of Mortham, which Leland terms "Mr. Rokesby's place, in *ripa citer*, scant a quarter of a mile from Greta Bridge, and not a quarter of a mile beneath into Tees." It is a large tower, surrounded by buildings of different ages: the tower has at the corner octangular turrets. The adjacent buildings are pointed into high and steep roofs. At the southern front is a low portal arch, affording entry to what was the castle court. At some distance is most happily placed, between two magnificent elms, the monument shown in the second view, and thus referred to in the poem:—

> "South of the gate an arrow's flight,
> Two mighty elms their limbs unite,
> As if a canopy to spread
> O'er the low dwelling of the dead;
> For their huge boughs in arches bent
> Above a massive monument,
> Carved o'er in ancient Gothic wise,
> With many a scutcheon and device."

This tomb is said to have been brought from the ruins of Eglistone Priory; and, from the arms with which it is sculptured, appears to have been a monument of the Fitz-Hughs.

"The whole scenery of this spot is so much adapted to the ideas of superstition, that it has acquired the name of Blockula, from the place where the Swedish witches were supposed to hold their Sabbath. The dell, however, has superstitions of its own growth; for it is supposed to be haunted by a female spectre, called the Dobie of Mortham. The cause assigned for her appearance is, a lady's having been whilom murdered in the wood; in evidence of which her blood is shown upon the stairs of the old tower at Mortham. But whether she was slain by a jealous husband, or by savage banditti, or by an uncle who coveted her estate, or by a rejected lover, are points upon which the traditions of Rokeby do not enable us to decide."—*Appendix to Rokeby*, edit. 1836.

TOMB OF THE FITZ-HUGHS, MORTHAM.

AUGUST, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. After 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Aftern.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 1h. 2h. 3h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 9h. 10h. 11h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	Su	8TH S. aft. TRIN.	4 26	6 0	56½	7 45	8 57	0 56	23¼	5 28		15		2 50	3 10	214
2	M	Lammas Day	4 27	5 56	56¼	7 43	9 19	1 44	27¾	6 41		16		3 30	3 50	215
3	Tu	Twilight ends 10h 32m	4 28	5 51	56	7 42	9 37	2 29	32½	7 51		17		4 5	4 25	216
4	W	Length of night 8h 50m	4 30	5 46	55¾	7 40	9 54	3 12	37½	8 59		18		4 40	5 0	217
5	Th	Oyster sea. com.	4 32	5 40	55½	7 39	10 10	3 54	42¼	10 7		19		5 15	5 35	218
6	F	Pr. Alf. born, 1844	4 33	5 34	55	7 37	10 27	4 34	47	11 10		20		5 50	6 10	219
7	S	Name of Jesus	4 35	5 26	54¾	7 38	10 45	5 16	51¼	Aftern.		21		6 30	6 45	220
8	Su	9TH S. aft. TRIN.	4 36	5 19	54½	7 36	11 7	5 58	55¼	1 24		(		7 10	7 30	221
9	M	Alpha Herculis souths 7h 51m, at an alt. of 53° 5′	4 38	5 11	54¼	7 34	11 34	6 43	58¼	2 33		23		7 55	8 25	222
10	Tu	*St. Lawrence*	4 39	5 2	54	7 30	Morning.	7 31	60½	3 36		24		8 0	9 35	223
11	W	Dog-days end. Hf.	4 41	4 53	53¾	7 28	0 9	8 32	61¼	4 45		25		10 10	10 45	224
12	Th	Grouse sh.b. [Q. D	4 42	4 43	53¼	7 26	0 51	9 16	61	5 43		26		11 25	At Mid-night.	225
13	F	Old Lammas Day	4 44	4 33	53	7 24	1 47	10 12	59	6 33		27		No Tide.	0 25	226
14	S	Alpha Lyræ souths 8h 58m, at an alt. of 77° 10′	4 45	4 22	52¾	7 22	2 53	11 9	55¾	7 13		28		0 55	1 20	227
15	Su	10TH S. aft. TRIN.	4 47	4 10	52½	7 20	4 8	Aftern.	51	7 46		○		1 45	2 5	228
16	M	*Assumption*	4 48	3 59	52¼	7 18	5 30	1 0	45¾	8 13		1		2 25	2 50	229
17	Tu	Ds. of Kent b. 1786	4 50	3 46	51¾	7 16	6 52	1 53	39¾	8 36		2		3 10	3 30	230
18	W	Gamma Aquilæ souths 9h 50m, at an alt. of 48° 46′	4 51	3 33	51½	7 14	8 16	2 45	33¾	8 57		3		3 50	4 10	231
19	Th	Length of day 14° 19′	4 53	3 20	51¼	7 12	9 39	3 36	28	9 18		4		4 30	4 50	232
20	F	Juno stationary	4 55	3 6	50¾	7 10	11 2	4 28	23	9 41		5		5 15	5 35	233
21	S	Blackcock sh. beg.	4 56	2 51	50½	7 8	Aftern.	5 21	18¾	10 6		6		6 0	6 20	234
22	Su	11TH S. aft. TRIN.	4 58	2 36	50¼	7 6	1 46	6 15	16	10 57		7		6 45	7 10	235
23	M	Beta Aquilæ souths 9h 39m, at an altitude of 41° 33′	4 59	2 21	49¾	7 4	3 2	7 11	14½	11 15		8		7 40	8 10	236
24	Tu	*St. Bartholomew*	5 1	2 5	49½	7 2	4 10	8 7	14½	Morning.		9		8 50	9 25	237
25	W	Alpha Cygni souths 10h 20m, at an alt. of 83° 16′	5 3	1 49	49¼	7 0	5 9	9 3	15¾	0 1		10		10 10	10 55	238
26	Th	Pr. Alb. b. 1819	5 4	1 32	48¾	6 58	5 55	9 58	18¼	0 59		11		11 35	No Tide.	239
27	F	Alpha Aquarii souths 11h 33m, at an alt. of 37° 11′	5 6	1 15	48½	6 56	6 31	10 50	21¾	2 5		12		0 10	0 40	240
28	S	*St. Augustine*	5 8	0 58	48	6 54	6 59	11 38	26	3 15		13		1 9	1 35	241
29	Su	12TH S. aft. TRIN.	5 9	0 40	47¾	6 52	7 23	Morning.		4 26		●		1 55	2 15	242
30	M	[St. John Bp. beh.	5 10	0 22	47¼	6 49	7 42	0 24	30¾	5 36		15		2 35	2 55	243
31	Tu	Day decreased 2h 57m	5 12	0 3	47	6 47	7 59	1 8	35½	6 46		16		3 10	3 30	244

AUGUST.

THE Field is Won; the spoil of golden grain,
With joyous shout, in noble heap is stored;
The loyal health by victors' hands is poured;
And o'er the foaming cup each fights again
The peaceful battles of the long campaign.
A worthy strife! All honours are their due—
From him who first the lines and trenches drew,
To him who last waved steel upon the plain.
Here 's to their deeds! What! pale, my Laura? Nay—
Would that my idle words had been unsaid!
They 've waked a memory, Time, I hoped, had heal'd,
Of that red plain on which your soldier lay—
But that is past, dear love, and we are wed:
Come, smile—and drink the Fortune of the Field.

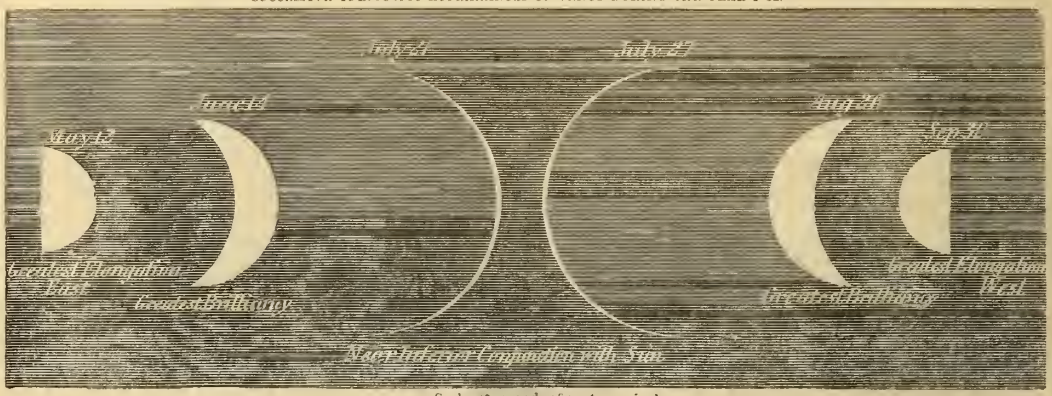
B.

'T is mellow August, crown'd with blushing fruits:—
The tawny apricot, the damson's gloom;
While pods droop seed-full—while the mushroom shoots,
And corn-flags glitter through the harvest's bloom.
'T is merry August, that, with gipsy grace,
In gipsy garments, and with wanton face,
Goes laughing by. Ay! follow, old and young,
Into the woods, and hear her charmèd tongue
Lisping light music through the gloaming grey,
Till eve's rich hour, when ruddy sunbeams roll:—
Now by dun mosses, where the harebells play;
Now where sound flies, like some enfranchised soul,
Through forest aisles; or seek her list'ning where
The clamorous martins cloud the glowing air.

K.

AUGUST.

SUCCESSIVE TELESCOPIC APPEARANCES OF VENUS DURING THE YEAR 1852.



Scale, 40 seconds of arc to one inch.

THE SUN is situated north of the Equator, and is moving south. On the 23rd day, at 1h. 6m. A.M., he passes from the sign Leo to that of Virgo (the Virgin), having been in the former sign 31 days 6 hours 41 minutes. On the 1st day his distance from the earth is 96,388,000 miles. He rises and sets on the 15th, at the E.N.E. and W.N.W. points of the horizon respectively. His meridian altitude, and time of being south, or erossing the meridian, are shown daily in the Calendar pages.

On the 1st, the MOON is in the constellation Aquarius; on the 3rd she enters Pisees; on the 4th, Cetus; on the 6th, Pisees; on the 7th, Aries; and on the 8th, Taurus. She passes on the 11th into Gemini; crosses the Milky Way, and enters on the 13th into Cancer; on the 15th, into Leo; and on the 17th passes into the constellation Virgo, where she remains until the 20th, when she enters Libra; on the 22nd she is in Scorpio; and Serpentarius; from thence she erosses the Milky Way to Sagittarius; on the 26th, into Capricornus; on the 28th, in Aquarius; on the 30th, in Pisees; and on the 31st, in Cetus.

She is above the horizon when the Sun is below, during the morning hours till the 13th, after the 28th, and during the evening hours after the 20th.

She is near Uranus on the 7th; Saturn on the 8th; Venus on the 13th; Mercury on the 17th; Mars on the 18th; and Jupiter on the 21st.

She is on the Equator on the 5th; is at her greatest north declination on the 12th; on the Equator again on the 18th; and is at her greatest south declination on the 25th.

MERCURY is in the constellation Leo throughout the month. He rises before the Sun throughout the month, and sets after him till the 25th. He sets on the 1st, at 8h. 38m. P.M.; on the 9th, at 8h. 13m.; on the 18th, at 7h. 38m.; and on the last day at 6h. 39m. On the 1st, the Sun sets 52 minutes before the planet, and this interval gradually decreases till the 25th, when both the planet and Sun set together. He is therefore moderately well situated for observation during the first days of the month. At the eommencement he sets near the W. by N., and from the 18th near the W. point of the horizon. He is moving eastward among the stars till the 20th; is stationary among them on the 21st; and after that date to the end of the month is moving westward. He is at his greatest eastern elongation on the 7th; is in aphelion on the 8th; and is near the Moon on the 17th. For his path in the heavens, and relative position to the stars, see diagram in Deeember.

VENUS is in the eonstellation Caneer throughout the month. She is a morning star, and rises before the Sun; on the 2nd, at 3h. 26m. A.M.; on the 16th, at 2h. 21m. A.M.; and on the last day, at 1h. 24m. A.M., she shines with great brilliancy. She rises near the E.N.E. point of the horizon throughout the month. She is almost stationary amongst the stars (see diagram), and is near the Moon on the 13th.

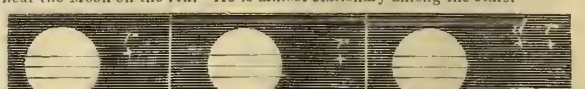
MARS is in the constellation Virgo throughout the month. He is an evening star, and sets on the 1st at 9h. 26m. P.M.; and on the last day at 7h. 59m. P.M.; near the W. point at the beginning, and near the W. by S. towards the end of the month. He is moving eastward among the stars; is near the Moon on the 18th, and Spica Virginis towards the end of the month. His path in the heavens, and relative situation to the large stars near him, are shown in the diagram in April.

JUPITER is in the constellation Libra throughout the month. He is an evening star, and sets on the 1st at 10h. 50m. P.M., and on the last day at 9h. 2m. PM., near the W.S.W. points of the horizon; he moves slowly eastward among the stars, and is near Alpha Libra on the 11th, and the Moon on the 21st. He souths at an altitude of 23½°, decreasing to 22¼° by the last day.

JUPITER'S SATELLITES.—A few of the eclipses of the satellites are visible.

SATURN is in the constellation Aries throughout the month. He rises on the 1st at 10h. 57m. P.M., and on the last day at 9h. 5m. P.M., near the E.N.E. point of the horizon. He is almost stationary among the stars during the month; he is near the Moon on the 8th.

URANUS is in the constellation Aries throughout the month. He rises on the 1st day at 10h. 25m., and on the last day at 8h. 31m. P.M., near the E.N.E. He souths on the last day at 3h. 47m. A.M., at an altitude of 52½°. He is near the Moon on the 7th. He is almost stationary among the stars.



1st Sat. 2nd Sat. 3rd Sat.

MAY.

(*Continued from page 22.*)

SATURN is in the eonstellation Aries throughout the month. He rises and sets at nearly the same time with the Sun, and is not favourably situated for observation till towards the end of the month, when he is visible a little before sunrise, near the E.N.E. horizon; he is near the Moon on the 17th.

URANUS is in the eonstellation Aries throughout the month. He rises on the 1st at 4h. 19m. A.M., and on the last day at 2h. 29m. A.M., near the E.N.E. point of the horizon. He is near the Moon on the 17th. He is moving eastward among the stars.

Days of the Month.	Mercury. Aftern.	Venus. Morning.	Mars. Aftern.	Jupiter. Aftern.	Saturn. Morning.	Uranus. Morning.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	1 49	10 52	3 18	6 6	6 22	5 45
6	1 49	10 26	3 9	5 47	6 3	5 25
11	1 44	10 4	3 1	5 29	5 44	5 6
16	1 34	9 46	2 53	5 12	5 25	4 46
21	1 18	9 32	2 45	4 54	5 6	4 26
26	0 54	9 20	2 37	4 37	4 46	4 7
31	0 22	9 12	2 29	4 20	4 27	3 47

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Re-appearance.	2nd Satellite. Re-appearance.
d. h. m.	d. h. m.
1 10 37 P.M.	8 10 4 P.M.
17 8 55 P.M.	

3rd Satellite.

6 7 41 P.M. D.
6 9 42 P.M. R.

OCCULTATIONS OF STARS BY THE MONTH.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
33 Piscium	5	3 10 55 P.M.	Bright	4° & 83°
		3 11 36 P.M.	Dark	N.
Zeta Tauri	3½	11 1 5 A.M.	Bright	N. of 38°
		11 1 53 A.M.	Dark	N.
Chi Sagittarii	6	25 6 21 P.M.	Dark	24° & 66°
		25 7 34 P.M.	Bright	N.
A Star	6	26 10 40 P.M.	Dark	34° & 67°
		25 11 29 P.M	Bright	N.

TIMES of CHANGES of the MOON,

And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
LAST QUARTER ...	8	1	27	A.M.
NEW MOON ...	15	1	58	P.M.
FIRST QUARTER..	22	6	2	A.M.
FULL MOON ...	29	3	6	P.M.
APOGEE	6	2		P.M.
PERIGEE	18	10		A.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	10 30	81 7	7 31	75 20	11 59	89 23	14 48	105 10	3 2	75 15	2 25	76 7	22 42	99 7
6	10 50	84 2	7 26	75 10	12 10	90 41	14 49	105 18	3 3	75 12	2 25	76 6	22 42	99 9
11	11 5	86 36	7 24	74 54	12 22	91 59	14 51	105 26	3 4	75 10	2 25	76 6	22 41	99 12
16	11 15	88 38	7 26	74 36	12 33	93 17	14 52	105 36	3 4	75 9	2 25	76 6	22 41	99 16
21	11 18	89 49	7 32	74 16	12 45	94 36	14 55	105 46	3 4	75 9	2 25	76 7	22 40	99 18
26	11 13	89 50	7 42	74 4	12 57	95 54	14 57	105 58	3 5	75 9	2 25	76 8	22 40	99 21
31	11 21	88 25	7 53	73 59	13 9	97 12	15 0	106 10	3 5	75 10	2 25	76 9	22 40	99 25

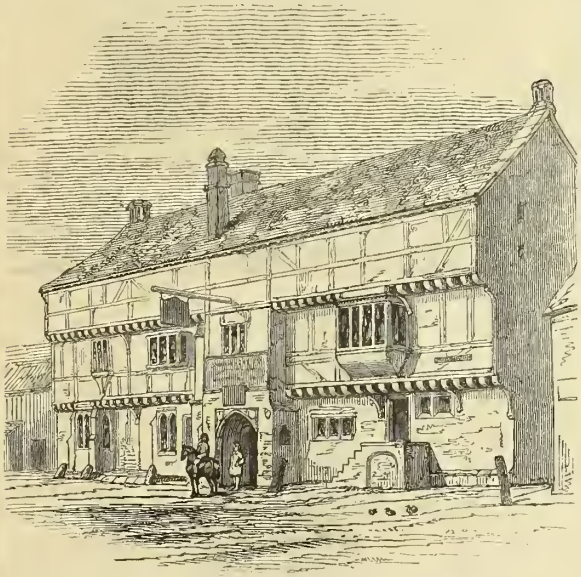
AUGUST.

JAMES, DUKE OF MONMOUTH, IN SOMERSETSHIRE, AUGUST, 1680.

MANY are the memorials which exist, to this day, of the unfortunate Duke of Monmouth, the natural son of Charles II.; and whose popularity with the nation, still more than the presumed partiality of his father, made him a somewhat formidable competitor for the succession, in the actual circumstances of the legitimate heir.

Somerset and Dorset were the closing scenes of Monmouth's career. In 1680, he made a memorable progress, accepting the hospitality of his distinguished friends, and visiting the estates of the country party; but the gentlemen of the court shrank from contact with one whose connexion with the opposition and democratic members of Parliament was so notorious. In August, when Monmouth started on his progress, incredible numbers flocked to see this great champion of the English nation, who had been so successful against the Dutch, French, and Scots. He first went into Wiltshire, and honoured the worthy Squire Thynne, of Longleate House, with his company for some days. From Longleate Monmouth journeyed into Somerset, caressed with the joyful acclamations of the country people, who cried, "God bless King Charles and the Protestant Duke!" In some towns and parishes through which he passed, they strewed the streets and highways with herbs and flowers, especially at Ilchester and South Petherton, others presenting him with bottles of wine. When the Duke came within ten miles of White Lackington House, the seat of George Speke, Esq., one mile distant from Ilminster, he was met by two thousand persons on horseback, whose number increased to twenty thousand. To admit so large a multitude, several perches of the park paling were taken down. His Grace, his

THE "MONMOUTH TREE," BENEATH WHICH MONMOUTH SAT, AT WHITE LACKINGTON, NEAR ILMINSTER.



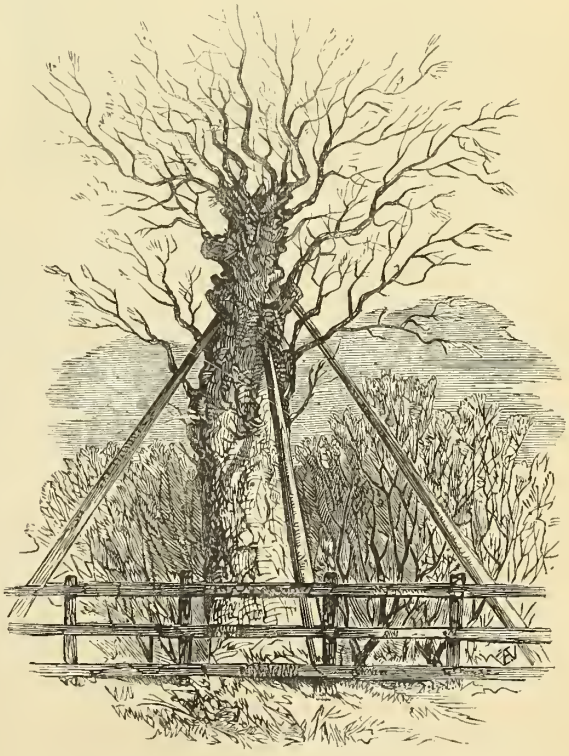
THE GEORGE INN, NORTON ST. PHILIP'S, SOMERSET.

party, and attendants, took refreshment under the famed sweet Spanish chestnut-tree, now standing, which measures at three feet from the ground upwards of twenty-six feet in circumference. The old branches have been mostly removed by the ravages of time; but there are others attached to the stock which produce large timber, as well as a quantity of fruit every year. White Lackington House is now a farm: a great part of the house has been pulled down.

This famous tree forms the first of the accompanying illustrations. The second and third engravings carry us to Monmouth's last defeat and capture. It was in the village of Norton St. Philip's, between Bath and Frome, that the ill-fated Duke was attacked, on June 27, 1685, by the Royalists, whose advanced guard had marched from Bath, under the Duke of Grafton, Monmouth's half-brother. Colonel Holmes, who was at the head of Monmouth's army, had an arm nearly shot off in the engagement; and it is related that the brave soldier, unassisted, completed the amputation with the cook's knife in the kitchen of the George Inn, at the village. This large old mansion was formerly a granary, belonging to Hinton Abbey: its capacious porch, the designs of some of its windows, and its overhanging upper stories (upon rude corbels), and its inner gallery, leading to what once were bed-chambers,—all denote the pile to have been erected in the early portion of the 15th century.

We now approach the scene of Monmouth's capture. The decisive battle of Sedgemoor was fought on the 5th of July, after which Monmouth and his friends fled across the boundaries of Wiltshire, and at Woodyate's Inn, near Salisbury, on the road to Blandford, turned their horses adrift; and thence crossed the country, nearly due south, to "the Island," in the parish of Horton, in Dorsetshire, where, in a field called to this day "Monmouth Close," was found the would-be king. An ash-tree, at the foot of which he was found crouched in a ditch, and half-hid under the fern, was standing a few years ago, and bore the carved initials of persons who had visited it; and it was propped up for preservation, as shown in the accompanying view.

On his capture, the Duke was first taken to the house of Anthony Etterick, Esq., a magistrate, who resided at Holt, which adjoins Horton. Tradition, which records the popular feeling rather than the fact, reports that the poor woman who informed the pursuers that she had seen two strangers lurking in the Island—her name was Amy Farrant—never prospered afterwards; and that Henry Parkin, the soldier who, spying the skirt of the smock-frock which the Duke had assumed as a disguise, recalled the searching party just as they were leaving the Island, burst into tears, and reproached himself bitterly for his fatal discovery. —*Notes and Queries.*



"THE MOUNTAIN ASH," UNDER WHICH MONMOUTH WAS CAPTURED.

SEPTEMBER, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 3h. 4h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 8h. 9h. 10h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	W	*Giles.* Partr.and Bustard shooting begins.	5 15	0 16	46¾	6 44	8 14	1 50	40½	7 54		17		3 45	4 0	245
2	Th	Lond.bt.O.S.1666	5 16	0 35	46¼	6 42	8 32	2 31	45¼	9 0		18		4 15	4 30	246
3	F	Length of day 13h 23m	5 17	0 54	46	6 40	8 50	3 12	49¾	10 5		19		4 45	5 0	247
4	S	[*Old St. Bar.*	5 18	1 14	45½	6 38	9 10	3 54	54	11 12		20		5 15	5 30	248
5	☽	13TH S. aft. TRIN.	5 20	1 33	45¼	6 36	9 34	4 37	57¼	Aftern.		21		5 45	6 0	249
6	M	Beta Lyræ souths 7h 4'm, at an altitude of 71° 43'	5 22	1 53	44¾	6 34	10 4	5 23	59¾	1 26		☾		6 20	6 40	250
7	Tu	*Eunurchus*	5 23	2 13	44½	6 32	10 41	6 12	61¼	2 29		23		7 5	7 30	251
8	W	Nat. of B. V. Mary	5 25	2 34	44	6 30	11 29	7 3	61½	3 31		24		8 0	8 40	252
9	Th	Gamma Aquilæ souths 8h 23m, at an alt. of 48°46'	5 27	2 54	43¾	6 28	Morning.	7 57	60¼	4 23		25		9 25	10 5	253
10	F	Length of night 11h 3m	5 28	3 15	43¼	6 25	0 29	8 53	57½	5 7		26		10 50	11 30	254
11	S	Day breaks 3h 29m	5 30	3 36	43	6 23	1 41	9 49	53½	5 43		27		No Tide.	At Noon.	255
12	☽	14TH S. aft. TRIN.	5 31	3 56	42½	6 21	3 1	10 45	48¾	6 12		28		0 35	1 0	256
13	M	Mercury stationary	5 33	4 17	42¼	6 19	4 25	11 40	42½	6 36		○		1 25	1 45	257
14	Tu	*Holy Cross*	5 35	4 38	41¾	6 17	5 51	Aftern.	36¼	6 59		1		2 5	2 25	258
15	W	Ember Week	5 36	4 59	41½	6 14	7 16	1 26	30	7 20		2		2 45	3 5	259
16	Th	Buck hunt. ends	5 38	5 20	41	6 12	8 43	2 20	24½	7 44		3		3 30	3 50	260
17	F	*Lambert*	5 39	5 41	40½	6 9	10 9	3 14	19¾	8 8		4		4 10	4 30	261
18	S	K.Geo.I.&II.lan.	5 40	6 2	40¼	6 7	11 35	4 9	16½	8 36		5		4 50	5 15	262
19	☽	15TH S. aft. TRIN.	5 42	6 24	39¾	6 5	Aftern.	5 6	14½	9 14		6		5 35	5 55	263
20	M	Twilight ends 7h 58m	5 44	6 45	39½	6 2	2 4	6 3	14	9 57		☽		6 20	6 45	264
21	Tu	*St. Matthew*	5 46	7 6	39	6 0	3 6	6 59	15	10 53		8		7 10	7 45	265
22	W	Autumn com. at 9h 41m	5 48	7 26	38¾	5 58	3 56	7 54	17¼	11 55		9		8 30	9 15	266
23	Th	Fomahant souths 10h 38m, at an altitude of 8° 7'	5 50	7 47	38¼	5 56	4 34	8 46	20½	Morning.		10		9 55	10 45	267
24	F	Juno in opposition to the Sun 9h 47m A.M.	5 51	8 8	38	5 54	5 5	9 35	24½	1 5		11		11 25	Midnight	268
25	S	Length of day 11h 59m	5 53	8 28	37½	5 52	5 28	10 22	29	2 14		12		No Tide.	0 30	269
26	☽	16TH S. aft. TRIN.	5 55	8 49	37	5 49	5 47	11 5	34	3 26		13		0 55	1 15	270
27	M	[*S. Cyprian*	5 57	9 9	36¾	5 47	6 4	11 47	39	4 34		14		1 35	1 55	271
28	Tu	Length of night 12h 14m	5 59	9 29	36¼	5 45	6 21	Morning.		5 42		●		2 10	2 30	272
29	W	*S. Mich.* Mich.D.	6 0	9 49	36	5 42	6 37	0 29	43¾	6 50		16		2 45	3 0	273
30	Th	*St. Jerome*	6 1	10 8	35½	5 39	6 54	1 9	48½	7 55		17		3 15	3 30	274

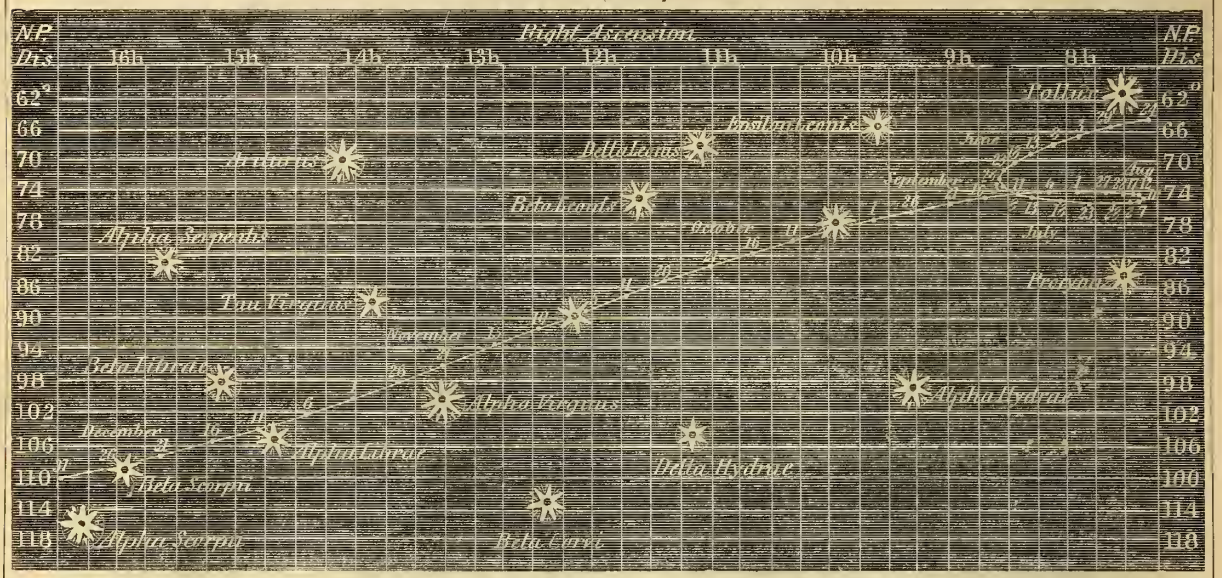
SEPTEMBER.

Stiff are the plains with stubble, where so late
  Waved golden seas that every breath could sway.
  Already from the sad trees drop away
Some early parting leaves, that ante-date
The coming desolation. Now the fate
  Of many a goodly bird of guarded life
  (Guarded perchance at cost of midnight strife
And human blood) is poising. Thou, his mate,
Pray the white hand yon gunner holds so fast
  May still detain him; pray for hostile sky,
    Or scorching suns with hideous glare to shine;
Or wish him "troops of friends" of jovial cast;
  Or, for a faltering hand and wavering eye,
    Wish him thrice glorious nights and fiery wine. B.

With stained mouth and loose luxuriant dress,
  September comes! A reveller, sure, is he,
And dryads' sport; for see! in mirthfulness
  They tempt him still with gourd and mulberry.
Yonder the wain, rich-freighted, ploughs the sward,
  And yonder still the sunburnt reapers toil;
There champs the mill, and there the garner 's stored,
  And there profuse the fowler's feathery spoil.
At eve now pours the yellow harvest-moon
  Her beams, which lend enchantment to the hours:
So dews are plentiful, and at her noon
  Crown as with coronals the wakeful flowers.
From hedgeway bowers the trailing hops are torn,
Orchards are thinn'd, and purple paints the morn. K.

SEPTEMBER.

PATH OF VENUS FROM MAY 24 TILL DECEMBER 31, 1852.



THE SUN is situated north of the Equator till the evening of the 22nd, when he crosses the Equator; going southward, he passes from the sign Virgo (the Virgin) to that of Libra (the Balance) on the 22nd day at 0h. 41m. P.M., and Autumn commences, he having been in the former sign 30 days, 20 hours, 35 minutes. On the 1st day his distance from the Earth is 95,805,500 miles. He rises and sets on the 23d at the east and west points of the horizon. His meridian altitudes and times of southing are shown daily in the Calendar pages.

On the 1st, the Moon is in the constellation Cetus; on the 2nd enters into Pisces; and on the 3rd, into Cetus again; on the 4th, Aries, passes through Taurus, and on the 7th, is in Gemini, and traversing the Milky Way; on the 10th enters Cancer; on the 11th she is in Leo; on the 13th in Virgo, where she continues until the 17th, when she enters Libra. On the 18th, she is in Scorpio; on the 19th, in Serpentarius and the Milky Way; on the 20th in Sagittarius; on the 21st re-enters the Milky Way; on the 22nd is in Capricornus; on the 24th in Aquarius; on the 25th, in Pisces; on the 27th, in Cetus, and on the 29th, in Pisces; on the 30th, she enters into Cetus, and on the 31st, into Aries.

She is above the horizon when the Sun is below, during the morning hours till the 11th, and from the 26th; and during the evening hours from the 18th.

She is near Uranus on the 3rd; Saturn on the 4th; Venus on the 10th; Mercury on the 12th; Mars on the 16th; Jupiter on the 17th; and Uranus on the 30th.

She is on the Equator on the 1st; is at her greatest north declination on the 8th; crosses the Equator on the 15th; is at her greatest south declination on the 21st; and crosses the Equator a third time during the month on the 28th, going north.

MERCURY is in the constellation Leo till the 27th; and is in Virgo till the end of the month. He sets before the Sun throughout the month, and rises before him from the 5th day. He rises on the 7th at 5h. 1m. preceding the Sun by 22 minutes; on the 10th, at 4h. 35m.; the 12th, at 4h. 16m.; the 16th, at 4h. 3m.; the 19th, at 4h. 0m.; the 22nd, at 4h. 5m.; and on the last day at 4h. 39m. His time of rising precedes that of the Sun on the 10th, by 52m.; the 13th, by 1h. 16m.; the 16th hy 1h. 34m.; from the 19th to the 22nd, by 1h. 42m., and which interval gradually decreases to about 1½h. by the end of the month. This planet is therefore well situated for observation by the naked eye from the 10th of this month. He rises on the 10th, at the E. by N., and near this point during the remainder of the month, varying from a little N. of it till the 24th, and a little S. from the 25th of the month. He is moving westward among the stars till the 12th; is stationary among them on the 13th, and is moving eastward from the 14th to the end of the month; is in inferior conjunction with the Sun on the 4th; near both the Moon and Pallas on the 12th; at his greatest western elongation on the 20th; and in perihelion on the 21st. For his path in the heavens, and relative position among the stars see the diagram in December.

VENUS is in the constellation Cancer till the 24th, and in Leo till the end of the month; she is a morning star, and rises on the 1st at 1h. 42m. A.M.; on the 15th, at 1h. 33m. A.M., and on the last day at 1h. 44m. A.M. She shines with brilliancy: she rises near the E.N.E. throughout the month. She is moving slowly eastward among the stars, and directly towards Regulus; is near the Moon on the 10th, and is at her greatest western elongation on the 30th.

MARS is in the constellation Virgo throughout the month; he is an evening star, and sets on the 1st at 7h. 53m. P.M., and on the last day at 6h. 4m. P.M. near the W. by S. point at the beginning, and near the W. by S. at the end of the month. He is moving eastward among the stars, and is near the Moon on the 16th. His path in the heavens and relative position to the large stars near him are shown in the diagram in April.

1st Sat. 2nd Sat. 3rd Sat.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury.	Venus. Morning.	Mars. Aftern.	Jupiter. Aftern.	Saturn. Morning.	Uranus. Morning.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	Morn.	9 10	2 28	4 16	4 23	3 43
6	11 39	9 5	2 20	4 0	4 3	3 23
11	11 9	9 1	2 13	3 43	3 43	3 3
16	10 52	8 58	2 6	3 26	3 23	2 43
21	10 49	8 56	1 59	3 10	3 3	2 22
26	10 55	8 55	1 52	2 54	2 42	2 2
30	11 4	8 55	1 47	2 41	2 26	1 46

JUPITER'S SATELLITES.

Eclipses of

1st Satellite. Re-appear.	2nd Satellite. Re-appear.
d. h. m.	d. h. m.
2 7 13 P.M.	2 7 16 P.M.
25 7 25 P.M.	

3rd Satellite.
18 7 35 P.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitude visible.
		d. h. m.		
Eta Geminorum	4	8 2 20 A.M.	Bright	14° & 84°
		8 3 25 A.M.	Dark	N.
Nu Scorpii	4	18 5 37 P.M.	Dark	21° & 71°
		18 6 48 P.M.	Bright	N.
27 Capricornii	6	23 10 21 P.M.	Dark	21° & 69°
		23 11 21 P.M.	Bright	N.
29 Aquarii	6	24 11 19 P.M.	Dark	8°S.&72°
		25 0 31 A.M.	Bright	N.

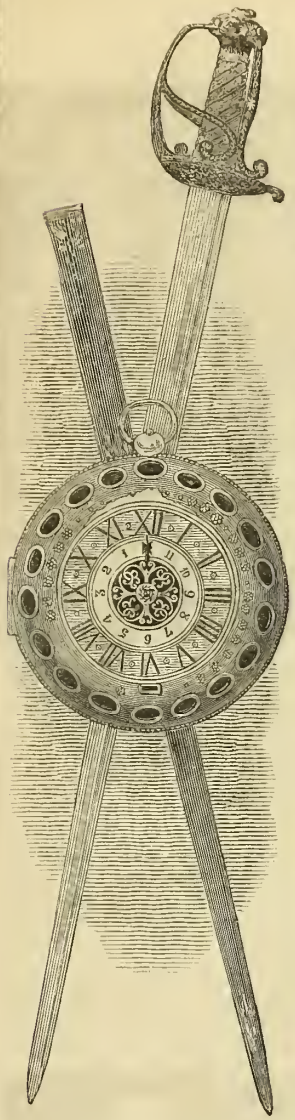
TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
LAST QUARTER ...	6	6	34	P.M.
NEW MOON	13	10	38	P.M.
FIRST QUARTER...	20	1	17	P.M.
FULL MOON	28	6	25	A.M.
APOGEE...	3	6	0	A.M.
PERIGEE	15	10	0	A.M.
APOGEE	30	7	0	P.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance	Saturn. Right Ascension.	Saturn. North Polar Distance	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	10 58	87 58	7 56	73 59	13 11	97 27	15 0	106 13	3 5	75 10	2 25	76 10	22 39	99 25
6	10 39	84 38	8 10	74 5	13 24	98 45	15 3	106 26	3 5	75 12	2 24	76 11	22 39	99 28
11	10 32	82 9	8 26	74 20	13 36	100 1	15 6	106 39	3 4	75 15	2 24	76 13	22 38	99 31
16	10 37	81 5	8 43	74 47	13 49	101 16	15 9	106 53	3 4	75 18	2 23	76 16	22 38	99 34
21	10 55	81 48	9 1	75 26	14 1	102 30	15 13	107 8	3 3	75 22	2 23	76 19	23 38	99 37
26	11 23	84 2	9 21	76 17	14 14	103 42	15 16	107 23	3 2	75 26	2 22	76 22	22 37	99 40
30	11 47	86 33	9 36	77 6	14 25	104 38	15 19	107 35	3 1	75 30	2 22	76 24	22 37	99 43

SEPTEMBER.



SWORD AND WATCH OF OLIVER CROMWELL.

THE SIEGE OF DROGHEDA, SEPTEMBER 10, 1649.

The identical Sword which Oliver Cromwell used at the memorable siege of Drogheda is preserved in the United Service Museum, Whitehall, and it bears on its blade the marks of two musket bullets. The hilt and guard are painted black, and richly ornamented with gilded trophies, arabesques, &c.; the grip is of black shagreen. This sword was inherited by Joshua S. Simmons Smith, Esq., as a collateral descendant of the Protector. It is related that, at the siege of Drogheda, Cromwell's troops mounted the breach twice, and were twice repelled; but that he himself led the third assault, and conquered.

With the Sword is engraved a Watch, also Cromwell's. It bears the name of James Cartier as maker, and is a clock-watch, which strikes the hours; the outer case is of leather, perforated, and studded with silver. The watch is now in the possession of J. H. Fawkes, Esq., of Farnley Hall.

DEATH OF GENERAL WOLFE, AT QUEBEC, SEPT. 13, 1759.

The Sword here engraved was worn by the gallant Wolfe on the memorable day of his victory and death at Quebec. This relic is silver-mounted; the grip of horn, spirally fluted. The sword-blade has evidently been ground down to its present length from a longer weapon; is of excellent quality, for the maker's name stamped on it shows it was fabricated by Heinrich Koll, at Solingen, a place long celebrated for the excellence of its sword-blades. The scabbard is of black leather, the chape and lockets being of silver. This Sword is in the interesting collection of weapons in the United Service Museum, to which establishment it was presented by George Warde, of Beechmont, Seven Oaks, Esq. Mr. Warde inherited this sword from his great uncle, General the Hon. George Warde, Colonel of the 4th Dragoon Guards, who became possessor of it as executor to General Wolfe's mother, Mrs. Henrietta Wolfe.

BIRTHPLACE OF NELSON—BURNHAM THORPE.

BIRTH OF NELSON, SEPTEMBER 29, 1758.

We possess many memorials of the illustrious Nelson; but neither of them surpasses in interest the house in which he was born—the Parsonage at Burnham Thorpe, of which parish his father was rector. In Arthur's Life, we have Nelson's own account of his birth and early life:—"I was born Sept. 29th, 1758, in the Parsonage-house; was sent to the High-school at Norwich, and afterwards removed to Northway, from whence, on the disturbance with Spain relative to the Falkland Islands, I went to sea with my uncle, Captain Maurice Suckling, in the *Raisonnable*, of 64 guns; but the business with Spain being accommodated, I was sent in a West India ship belonging to the house of Hibbert Purrier Horton, with Mr. John Rathbone, who had formerly been in the navy, in the *Dreadnought*, with Captain Suckling. From this voyage I returned to the *Triumph*, at Chatham, in July, 1772; and if I did not improve in my education, I returned a practical seaman, with a horror of the Royal Navy, and with a saying, then constant with the seaman—'*Aft the most honour, forward the better man.*'"

SWORD OF GENERAL WOLFE, IN THE UNITED SERVICE MUSEUM.

OSTEGO HALL.

COOPER, THE AMERICAN NOVELIST, DIED SEPT. 14, 1851.

At Ostego Hall, on the border of Ostego Lake, in central New York (at the place named after his father, Cooperstown), died, on Sept. 14th, 1851, James Fennimore Cooper, aged 63, who has been termed the Horace Vernet of novelists, and the Fielding of the Sea; as attested by his "Spy," "Pioneers," "Pilot," "Lionel Lincoln," "Last of the Mohicans," "Prairie," "Red Rover," and many other stories of the sea, which have earned him world-wide celebrity. "His death," says an American critic, "will resound through that great world of readers in which Mr. Cooper has stood eminent for a quarter of a century, like the fall of one of their great old oaks of our primeval forest, which the American romancer has himself so often described."

OCTOBER, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. 2h. 4h. 5h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 7h. 8h. 10h.	HIGH WATER at London Bridge. Morning	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg	H. M.				H. M.	H. M.	
1	F	*Remigius.* Pheasant shooting b.	6 2	10 27	35¼	5 36	7 14	1 51	52¾	9 2		18		3 45	4 0	275
2	S	Length of day 11h 30m	6 4	10 46	34¾	5 34	7 35	2 34	56½	10 8		19		4 10	4 25	276
3	☽	17TH S. aft. TRIN.	6 6	11 5	34¼	5 31	8 1	3 18	59¼	11 13		20		5 40	4 55	277
4	M	*O. St. Matthew*	6 8	11 23	34	5 29	8 35	4 5	61	Aftern.		21		5 10	5 30	278
5	Tu	Days have decreased 5h 16m	6 10	11 41	33½	5 26	9 19	4 55	61¾	1 22		22		5 45	6 5	279
6	W	*Faith*	6 12	11 58	33¼	5 24	10 13	5 47	61¼	2 16		☾		6 30	6 55	280
7	Th	Twilight ends 7h 16m	6 13	12 15	32¾	5 22	11 16	6 41	59¼	3 3		24		7 25	8 0	281
8	F	Length of day 11h 4m	6 15	12 32	32	5 19	Morning.	7 35	55¾	3 40		25		8 45	9 35	282
9	S	*St. Denys* [C.T.b.	6 17	12 48	32	5 17	0 33	8 30	51¼	4 11		26		10 20	11 0	283
10	☽	18TH S. aft. TRIN.	6 18	13 3	31¾	5 15	1 53	9 24	45¾	4 38		27		11 40	No Tide.	284
11	M	O.Mic.D. Ox.T.b.	6 20	13 18	31¼	5 13	3 16	10 17	39½	4 59		28		0 8	0 35	285
12	Tu	Mercury in conj. with the Moon at 10h 12m P.M.	6 21	13 33	31	5 10	4 42	11 10	33	5 20		29		0 55	1 20	286
13	W	Fire Insur. due	6 23	13 47	30½	5 8	6 10	Aftern.	27	5 43		○		1 40	2 0	287
14	Th	Alpha Aquilæ souths 6h 10m, at an alt. 47°	6 25	14 1	30¼	5 6	7 38	0 59	21½	6 7		1		2 20	2 40	288
15	F	Alpha Cygni souths 6h 59m, at an alt. 83° 16′	6 26	14 14	29¾	5 4	9 7	1 56	17½	6 35		2		3 0	3 25	289
16	S	Beta Aquarii souths 7h 42m, at an alt. 44° 44′	6 28	14 26	29½	5 2	10 32	2 54	14¾	7 9		3		3 45	4 5	290
17	☽	19TH S. aft. TRIN.	6 29	14 38	29	5 0	11 52	3 53	13¾	7 51		4		4 25	4 50	291
18	M	*St. Luke* [*Ethel.*	6 31	14 50	28¾	4 58	Aftern.	4 52	14¼	8 44		5		5 10	5 35	292
19	Tu	Day decreased 6h 9m	6 33	15 0	28¼	4 56	1 56	5 49	16¼	9 45		☽		6 0	6 25	293
20	W	Bat. of Nav. 1827	6 35	15 10	28	4 54	2 38	6 43	19¼	10 53		7		6 55	7 25	294
21	Th	Twilight begins 4h 42m	6 37	15 20	27½	4 52	3 9	7 33	23	Morning.		8		8 5	8 55	295
22	F	Twilight ends 6h 44m	6 38	15 29	27¼	4 50	3 35	8 20	27½	0 4		9		9 40	10 25	296
23	S	Length of night 13h 52m	6 40	15 37	27	4 48	3 56	9 5	32¼	1 14		10		11 5	11 40	297
24	☽	20TH S. aft. TRIN.	6 42	15 44	26½	4 46	4 12	9 47	37¼	2 25		11		No Tide.	0 5	298
25	M	*St. Crispin*	6 43	15 51	26¼	4 44	4 29	10 28	42¼	3 33		12		0 30	0 50	299
26	Tu	Length of day 9h 57m	6 45	15 57	25¾	4 42	4 44	11 8	47	4 40		13		1 10	1 30	300
27	W	Fomahant souths 8h 24m, at an altitude of 8° 7′	6 47	16 2	25½	4 40	5 1	11 50	51½	5 44		●		1 45	2 0	301
28	Th	*St. Sim.& St. Jude*	6 49	16 7	25¼	4 38	5 18	Morning.		6 54		15		2 15	2 30	302
29	F	Uranus in opposition to the Sun (5h 46m P.M.)	6 51	16 11	25	4 37	5 39	0 32	55½	8 0		16		2 45	3 0	303
30	S	Alpha Andromedæ souths.	6 53	16 14	24½	4 35	6 4	1 16	58½	9 6		17		3 15	3 30	304
31	☽	21ST S. aft. TRIN.	6 55	16 16	24¼	4 34	6 35	2 2	60¾	10 11		18		3 45	4 0	305

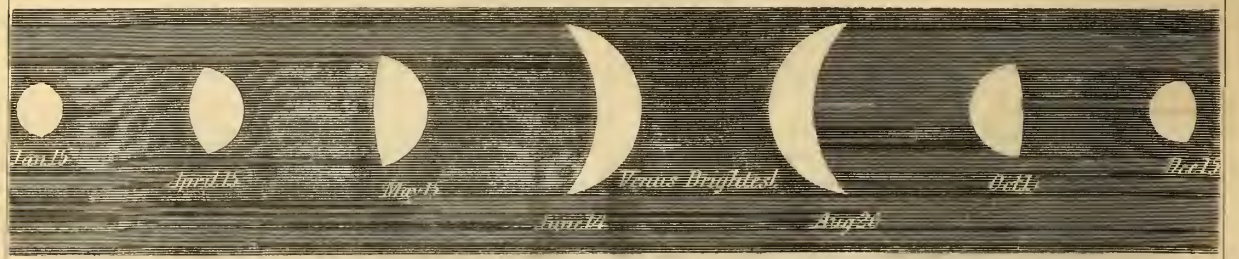
OCTOBER.

WINTER'S advancing guard October leads,
Charging the forests. Every wayward gust
Sweeps from the spray a thousand leaves to dust,
Or strews with tarnished spoils the spotted meads.
Gone is the swallow: in his place succeeds
A hardier race of guest birds, whom the North
Unkindly drives, with icy breezes, forth.
Beside the stacks the full-eyed robin feeds,
Promising closer friendship. Winds are raw,
And ways are foul. Be you, whose delicate cheek
"We would not have the wind salute too roughly,"
Our household Syrens now: with some old saw,
Wedded to music, or some love song, seek
To shame October, that he roars so bluffly. B.

'MID trees that rain their lavish gold around,
October smiles: on either hand a vat,
Fresh bubbling with the vineyard's juice; the ground
Meanwhile budding chrysanthemums, whereat
Pale Flora weeps, for these foretell her doom—
A stern imprisonment, till rosy Spring
Laughs o'er her chains, and lifts her from the tomb.
Now fields look bleach'd, and Summer swift takes wing;
O'er all the woods a hectic verdure reigns,
False as the flush on sad Consumption's cheek;
While bitter portents moan along the plains,
And distant mountains wear an aspect bleak.
In every gale we hear some farewell sigh,
And red leaves murmur as they fall, "We die!" K.

OCTOBER.

TELESCOPIC APPEARANCES OF VENUS.



THE SUN is situated south of the Equator, and is moving southward. On the 23rd day, at 5h. 54m. A.M., he passes from the sign Libra (the Balance) to that of Scorpio (the Scorpion), having been in the former sign 30 days 8 hours, 13 minutes. On the 1st day he is 95,024,000 miles from the Earth. He rises and sets on the 11th at the E. by S. and W. by S. points of the horizon. His meridian height, and his time of passing the meridian, are shown daily in the Calendar pages.

On the 1st the Moon is in the constellation Aries; on the 2nd in Taurus; and on the 5th, enters Gemini and the Milky Way; on the 7th she is in Cancer; the 8th, in Leo; on the 11th, in Virgo; on the 14th she passes into Libra; on the 15th, into Scorpio; on the 16th, into Serpentarius and the Milky Way; and on the 17th, enters Sagittarius and the Milky Way again; on the 20th she is in Capricornus; on the 22nd, in Aquarius; on the 23rd, in Pisces: on the 24th, in Cetus; and on the 26th, in Pisces; on the 27th she enters into Cetus; on the 28th, into Aries; on the 29th, into Taurus; and on the 31st, into Gemini and the Milky Way.

She is above the horizon when the Sun is below, during the morning hours, till the 11th and after the 25th; and during the evening hours, from the 18th.

She is near Saturn on the 1st; Venus on the 9th; Mercury on the 12th; Mars on the 15th; Jupiter on the 15th; Uranus on the 28th; and Saturn on the 28th.

She is at her greatest north declination on the 6th; is on the Equator on the 12th; at her greatest south declination on the 19th; and crosses the Equator on the 25th.

MERCURY is in the constellation Virgo till the 26th, and in Libra till the end of the month. He rises before the Sun till the 18th, and sets before him till the 17th. His times of rising are 4h. 44m. on the 1st; 5h. 22m. on the 7th; and 6h. 32m. on the 18th. These times precede those of the Sun by 1h. 16m. on the 1st, decreasing rapidly to 48m. on the 6th, and to nothing by the 17th. The times of setting after the 18th are within 12m. of those of the Sun; therefore, with the exception of a few days at the beginning of the month, the planet is ill situated for observation. He rises in the E. on the 5th, and in the E. by S. point of the horizon on the 14th. He sets near the W.N.W. towards the end of the month. He is moving eastward among the stars throughout the month. He is situated very near Spica Virginis about the middle of the month, is near the Moon on the 12th, and in superior conjunction with the Sun on the 18th. For his path in the heavens, and relative position to the surrounding stars, see the diagram in December.

VENUS is in the constellation Leo till the 28th, and in Virgo till the end of the month. She is a morning star: rises on the 1st at 1h. 45m. A.M.; on the 16th at 2h. 9m. A.M.; and on the last day at 2h. 41m. A.M.; near the E.N.E. at the beginning; at the E. by N. about the 20th; and near the E. points of the horizon at the end of the month. She is moving eastward among the stars, and is near the Moon on the 9th.

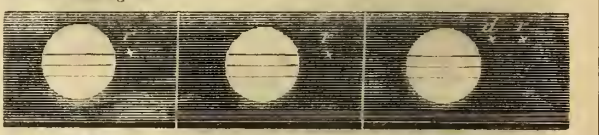
MARS is in the constellation Libra throughout the month. He is an evening star, and sets on the 1st at 6h. 32m. P.M., and on the last day at 5h. 25m. P.M.; near the W.S.W. at the beginning, and the S.W. by W. point at the end of the month. He is moving eastward among the stars; is near Alpha Libræ on the 4th; the Moon on the 15th; and Jupiter on the 27th. His path in the heavens, and relative position to the large stars near him, are shown in the diagram in March.

JUPITER is in the constellation Libra throughout the month. He is visible for some little time after sunset, setting on the 1st day at 7h. 8m. P.M., and on the last day at 5h. 29m. P.M., near the S.W. by W. points of the horizon. He is moving eastward among the stars, and is near the Moon on the 15th. He souths at an altitude decreasing from 21° at the beginning to about 19½° at the end of the month

JUPITER'S SATELLITES.—An eclipse of the 1st and one of the 3rd are visible.

SATURN is in the constellation Aries throughout the month. He is visible throughout the night, and rises on the 1st at 6h. 47m. P.M., and on the last day at 4h. 59m. P.M., near the E.N.E. point of the horizon. He moves slowly westward among the stars; is near the Moon on the 1st, and again on the 28th.

URANUS is in the constellation Aries throughout the month. He rises on the 1st at 6h. 23m. P.M., near E.N.E.; souths the following morning at 38m. after 1h., at an altitude of 52°; on the last day he rises at 4h. 27m. P.M., and passes the meridian at 35m. after 11h. P.M., at an altitude of 51¾°; on the 28th he is near the Moon; and on the 29th, is in opposition to the Sun, and therefore favourably situated for observation. He is moving very slowly westward among the stars.



1st Sat. 2nd Sat. 3rd Sat.

APRIL.

(*Continued from page* 18.)

MARS is in the constellation Cancer throughout the month. He is visible throughout the greater part of the night, and sets on the 1st at 3h. 42m.; and on the last day at 2h. 9m. A.M., near the N.W. by W. point of the horizon. He is moving slowly eastward among the stars, and is near the Moon on the 27th. His path in the heavens, and relative position to the large stars near him, are shown in the above diagram.

JUPITER is in the constellation Libra throughout the month. He is visible during the greater part of the night, rising on the 1st day at 9h. 51m. P.M., and on the last day at 7h. 32m. P.M., and midway between the E.S.E and S.E. by E. points of the horizon. He is moving very slowly westward among the stars, and is near the Moon on the 6th. He souths at an altitude of 21½° on the 1st, and of 22° on the last day.

JUPITER'S SATELLITES.—Several eclipses of the 1st, 2nd, and 3rd satellites are visible.

SATURN is in the constellation Aries throughout the month. He is visible for some little time after sunset during the early part of the month; is near the Moon on the 19th. He sets at 8h. 31m. on the 1st, and at 6h. 54m. on the last day.

URANUS is in the constellation Aries throughout the month. He sets on the 1st, at 8h. 31m. P.M.; on the last day at 6h. 43m. P.M., near the W.N.W. He is near the Moon on the 19th, and in conjunction with the Sun on the 24th; therefore he is badly situated for observation. He is moving slowly eastward among the stars.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Morning.	Venus. Morning.	Mars. Aftern.	Jupiter. Aftern.	Saturn. Morning.	Uranus. Morning.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	11 6	8 55	1 46	2 38	2 22	½ 42
6	11 18	8 56	1 40	2 22	2 1	1 22
11	11 31	8 57	1 34	2 7	1 40	1 1
16	11 42	8 58	1 28	1 51	1 19	0 41
21	11 53	8 59	1 23	1 36	0 58	0 20
26	Aftern.	9 0	1 18	1 20	0 37	Aftern.
31	0 15	9 2	1 13	1 5	0 15	11 35

JUPITER'S SATELLITES.

Eclipses of 1st Satellite. Re-appear.	Eclipses of 2nd Satellite. Re-appear.
d. h. m.	d. h. m.
11 5 43 P.M.	24 5 33 P.M.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars	Magnitude.	Times of disappearance & re-appearance of the Star.	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
A Star	6	2 10 27 P.M.	Bright	N. of 34°
		2 10 52 P.M.	Dark	N.
Kap. Capricorni	5	21 6 29 P.M.	Dark	31° & 70°
		21 7 34 P.M.	Bright	N.
30 Piscium	4½	24 5 17 P.M.	Dark	3° & 83°
		24 5 53 P.M.	Bright	N.
33 Piscium	5	24 7 13 P.M.	Dark	7° & 83°
		24 8 25 P.M.	Bright	N.

TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
LAST QUARTER ...	6	10	36	A.M.
NEW MOON	13	7	14	A.M.
FIRST QUARTER ...	19	11	56	P.M.
FULL MOON	27	11	54	P.M.
PERIGEE	13	8		P.M.
APOGEE	28	0		A.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	11 54	87 15	9 40	77 19	14 28	104 52	15 20	107 38	3 1	75 31	2 22	76 25	22 37	99 43
6	12 26	89 5	10 0	78 33	14 41	105 59	15 24	107 53	3 0	75 37	2 21	76 28	22 36	99 45
11	12 58	85 18	10 21	79 58	14 55	107 4	15 28	108 8	2 59	75 43	2 20	76 32	22 36	99 47
16	13 29	81 37	10 42	81 32	15 9	106 6	15 32	108 23	2 57	75 49	2 19	76 36	22 35	99 49
21	13 54	78 48	11 3	83 16	15 24	109 4	15 36	108 39	2 56	75 56	2 19	76 40	22 35	99 51
26	14 24	75 32	11 24	85 7	15 38	109 58	15 41	108 54	2 54	76 2	2 18	76 44	22 35	99 52
31	14 55	72 35	11 45	87 5	15 53	110 48	15 45	109 9	2 53	76 9	2 17	76 48	22 35	99 53

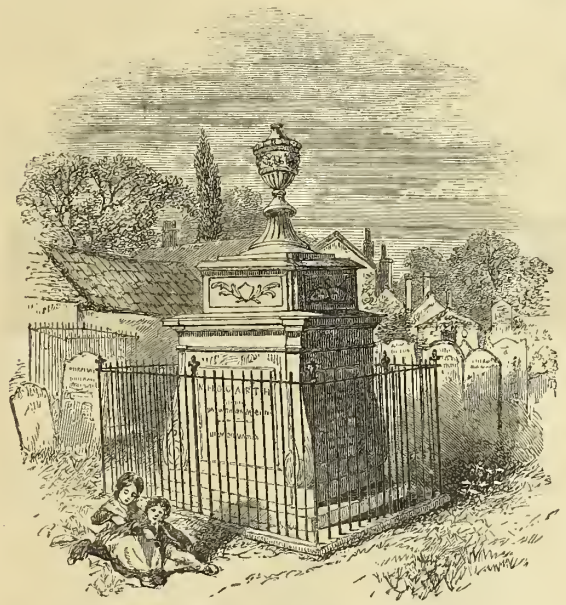
OCTOBER.

WILLIAM HOGARTH DIED OCTOBER 26, 1764.

Hogarth died about a month after he had completed his "Finis; or, the Tail-piece," the last time of using his pencil! Nearly on the same day Churchill published his "Independence," in which he referred to his antagonist as a departed genius:—

"Hogarth would draw him (envy must allow),
E'en to the life, was Hogarth living now."

The power of pleasing was, however, soon to cease both in painter and poet. Hogarth died within four weeks from the publication of this poem; and Churchill survived him only nine days. Hogarth was buried on the south-side of Chiswick churchyard, in a grave, over which a tomb was subsequently erected by subscription, headed by Garrick, who wrote the following epitaph, which is cut on the north side of the monument, beneath a bas-relief of a laurel, rest-stick, palette with the line of Beauty, a book inscribed "Analysis of Beauty," a mask, and a portfolio decorated with oak-leaves and acorns:—



TOMB OF HOGARTH, IN CHISWICK CHURCHYARD.

"Farewell, great painter of mankind!
Who reach'd the noblest point of art;
Whose *pictured morals* charm the mind,
And, through the eye, correct the heart.
If *genius* fire thee, reader, stay;
If *nature* touch thee, drop a tear;
If neither move thee, turn away!
For Hogarth's honoured dust lies here."

The tomb was kept up by subscription among the parishioners of Chiswick; until, in 1851, it fell into decay; but it is hoped this memorial of the "great painter of mankind" will be preserved.

SIR THOMAS WYATT DIED OCTOBER 11, 1542.

The ivy-clad pile in the accompanying view is the remains of Allington Castle, on the left bank of the Medway, just below Maidstone, and now occupied as two tenements. Allington was the birth-place of Sir Thomas Wyatt, the accomplished scholar of the time of Henry VIII., who was born here in the year 1503 It was also the seat of his son, Sir Thomas, who suffered for treason against Queen Mary. The father of the elder Sir Thomas, Sir Henry Wyatt, attached himself to the rising fortunes of Richmond, afterwards Henry VII., who placed him early in situations of emolument, so that in 1493 he was able to purchase the castle of Allington. Sir Thomas Wyatt, as an elegant courtier, a statesman of great sagacity and integrity, takes a prominent position in the history of the reign of Henry VIII., who, in 1542, created him steward of the King's manor of Maidstone. The brief remainder of his life he passed in retirement at Allington; hunting, and hawking, and shooting with the bow, and in bad weather devoting himself to the study and composition of verses; but he died October 11, 1542, of fever, brought on by his zeal in attending an unexpected summons from his sovereign. Wyatt has left us writings both in prose and verse; but taking into account the time at which he wrote, his prose is the more remarkable.

ALLINGTON CASTLE, KENT, THE BIRTH-PLACE OF SIR THOMAS WYATT.

CALIFORNIA RECEIVED HER GREAT SEAL, OCTOBER 5, 1849.

This Seal, adopted by a Convention held at San Francisco, was designed by Major R. S. Garnett, of the United States army. Each region wished to be represented in the design. The Sacramento district wanted a gold mine with a miner at work; San Francisco, its harbour and shipping: the Sonoma members thought no seal would be complete without something from their ancient "bear-flag;" whilst those from Los Angelos and San Diego were clamorous for their corn, vines, and olives. These several requirements have been met, as far as possible, in the accompanying design.

GREAT SEAL OF CALIFORNIA, ADOPTED OCT. 5TH, 1849.

Around the bevel of the ring are represented thirty-one stars, being the number of the states of which the Union will consist, upon the admission of California. The foreground figure represents the goddess Minerva, having sprung full-grown from the brain of Jupiter. She is introduced as a type of the political birth of California, without having gone through the probation of a territory. At her feet crouches a grisly bear, feeding upon clusters from a grape-vine, which, with a sheaf of wheat, are emblematic of the characteristics of the country. A miner is engaged at work, with a rocker and bowl at his side, illustrating the golden wealth of the Sacramento, upon whose waters are seen shipping, typical of commercial greatness; and the snow-clad peaks of the Sierra Nevada make up the background. Above, is the Greek motto, "Eureka" (I have found it), applying either to the principle involved in the admission of the State, or the success of the miners at work.

NOVEMBER, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h.	Moon's Age.	DURATION OF MOONLIGHT. After Sunset. O'Clock. 6h. 8h. 10h.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg.	H. M.	H. M.	H. M.	Deg.	H. M.				H. M.	H. M.	
1	M	*All Saints*	6 56	16 18	24	4 31	7 14	2 51	62	11 14		19		4 15	4 30	306
2	Tu	Mic.T.b. *All Souls*	6 58	16 18	23½	4 29	8 4	3 42	61¾	Aftern.		20		4 45	5 5	307
3	W	Vesta in opposition to the Sun at 7h 4m	7 0	16 18	23¼	4 27	9 3	4 34	60¼	1 2		21		5 20	5 40	308
4	Th	K. Will. III. land.	7 2	16 17	23	4 26	10 12	5 27	56½	1 40		22		6 5	6 30	309
5	F	Gunpowder Plot	7 4	16 15	22¾	4 24	11 28	6 20	53¾	2 14		☾		7 0	7 35	310
6	S	*Leonard.*	7 6	16 12	22¼	4 22	Morning.	7 12	48½	2 40		24		8 15	9 0	311
7	☩	22ND S. aft. TRIN.	7 7	16 9	22	4 21	0 47	8 3	42¾	3 3		25		9 45	10 25	312
8	M	Alpha Pegasi souths 7h 45m, at an alt. of 52° 56′	7 8	16 4	21¾	4 19	2 10	8 55	36½	3 23		26		11 5	11 35	313
9	Tu	Pr. of Wa. b. 1841	7 10	15 59	21½	4 18	3 35	9 47	30¼	3 44		27		No Tide.	At Noon.	314
10	W	[Lord Mayor's D.	7 11	15 53	21¼	4 16	5 3	10 41	24¼	4 5		28		0 25	0 50	315
11	Th	*St. Martin*	7 13	15 46	21	4 14	6 31	11 36	19¼	4 28		○		1 10	1 30	316
12	F	Cam. T. div. mid.	7 14	15 38	20¾	4 13	8 1	Aftern.	15¾	5 1		1		1 54	2 20	317
13	S	*Britius*	7 16	15 29	20½	4 11	9 26	1 36	13¾	5 40		2		2 40	3 0	318
14	☩	23RD S. aft. TRIN.	7 18	15 19	20¼	4 10	10 44	2 37	13¾	6 27		3		3 25	3 45	319
15	M	*Machutus*	7 20	15 9	20	4 9	11 47	3 37	15	7 28		4		4 10	4 30	320
16	Tu	Alpha Pegasi souths 7h 13m, at an alt. 52° 56′	7 22	14 58	19½	4 7	Aftern.	4 35	17¾	8 38		5		4 55	5 20	321
17	W	Hugh, Bp. Lin. Q.	7 23	14 46	19½	4 6	1 13	5 28	21½	9 51		6		5 45	6 10	322
18	Th	[Elizabeth acc.	7 25	14 33	19¼	4 5	1 40	6 17	25¾	11 3		☽		6 40	7 10	323
19	F	Length of day 8h 37m	7 27	14 19	19	4 4	2 3	7 3	30½	Morning.		8		7 45	8 20	324
20	S	Ed. King and Mar.	7 29	14 5	18¾	4 3	2 21	7 46	35½	0 14		9		9 0	9 40	325
21	☩	24TH S. aft. TRIN.	7 31	13 49	18½	4 1	2 36	8 27	40½	1 21		10		10 15	10 50	326
22	M	*S. Cecilia* [Ps. R. b.	7 32	13 33	18¼	4 0	2 51	9 8	45½	2 30		11		11 20	11 50	327
23	Tu	O. Mar. D. *Clement*	7 34	13 17	18	3 59	3 8	9 48	50	3 36		12		No Tide.	0 15	328
24	W	Saturn in conjunction with the Moon at 10h 9m P.M.	7 35	12 59	17¾	3 58	3 25	10 30	54¼	4 42		13		0 35	0 55	329
25	Th	*Catherine.* [Mich. T. ends	7 37	12 41	17¾	3 57	3 45	11 14	57¾	5 49		14		1 10	1 30	330
26	F	Vesta in conjunction with Upsilon Ceti.	7 39	12 22	17½	3 56	4 7	11 59	60¼	6 57		●		1 45	2 0	331
27	S	Ps. Mary Adel. b.	7 40	12 2	17¼	3 55	4 37	Morning.		8 3		16		2 15	2 35	332
28	☩	1ST S. in ADVENT	7 41	11 41	17	3 54	5 13	0 48	61¾	9 9		17		2 50	3 5	333
29	M	Length of night 15h 50m	7 43	11 20	17	3 53	6 0	1 38	62¼	10 8		18		3 20	3 40	334
30	Tu	*St. Andrew*	7 44	10 58	16¾	3 53	6 55	2 30	61	11 0		19		3 55	4 15	335

NOVEMBER.

When those we love are in a sullen mood,
  Small wrong, methinks, to leave them for awhile,
  Gladly returning for the old kind smile,
When the rebellious spirit is subdued.
And so with Nature, who hath hours so rude,
  Man, not enduring them, doth well to fly,
  And to fair Art bow down, her votary,
Till the once gracious presence be renewed.
So, black November, vent thy gloomy rage,
  Hurl thy dank fogs, and whirl thy driving rain,
    Remorseless, on the wandering traveller's head:
Our's be the lighted halls, the well-trod stage,
  The gladdening sound of music's mystic strain,
    And the proud dance's maze—till thou art dead.

B.

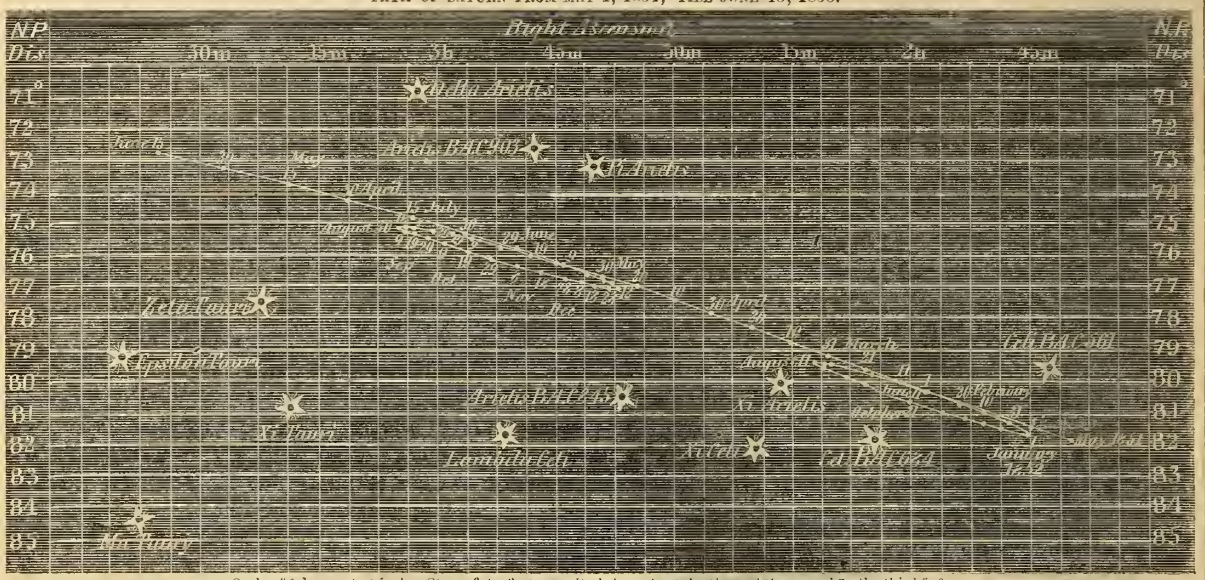
Sullen by fits, unloved of all the year,
  Forlorn November glooms upon the world,
Wraps his chill feet among the leaflets sere,
  And hails aloft the banner'd clouds unfurl'd!
No more the sun, with Midas'* power supreme,
  Holds a proud court o'er Autumn's yellow vales—
Denuded lands now crave each scanty gleam;
  Hush'd are the rills, and hush'd the nightingales!
Dumb, as in fear, the old earth's tuneful bands—
  Dead the sweet flowers!—and dying day by day
Glad Nature's smile! Like Niobe she stands,
  Her warm life ebbing in a mist of sighs,
  Her tears congealing in her rueful eyes,
Her garments blanch'd, and in her heart decay!

K.

* Scholars need not be reminded that "his touch" "turned everything into gold."

NOVEMBER.

PATH OF SATURN FROM MAY 1, 1851, TILL JUNE 15, 1853.



Scale of 6 degrees to 1 inch. Stars of the first magnitude have 8 petals; those of the second 7; the third 6, &c.

THE SUN is situated south of the Equator, and is moving southward. He passes on the 22nd day, at 2h. 25m. A.M., from the sign Scorpio (the Scorpion) to that of Sagittarius (the Archer), having been in the former sign 29 days 20 hours 31 minutes. On the 1st day his distance from the Earth is 94,206,000 miles. He rises and sets on the 1st at E.S.E. and W.S.W., and on the 27th at the S.E. by E. and S.W. by W. points of the horizon. His meridian altitude and his time of southing, in ordinary clock time, are given daily in the Calendar pages.

On the 1st, the MOON is in the constellation Gemini and the Milky Way; on the 3rd, enters Cancer; on the 5th, Leo; on the 7th, Virgo, where she remains until the 10th, when she passes into Libra; on the 12th, into Scorpio and Serpentarius, passes through the Milky Way, and on the 14th re-enters Serpentarius. On the 16th, she is in Capricornus; on the 18th, in Aquarius; on the 20th, in Pisces; on the 21st, in Cetus; on the 23rd, in Pisces, and in Cetus; on the 24th, in Aries; on the 25th, in Taurus; on the 28th, in Gemini and the Milky Way; and on the 30th, in Cancer.

She is above the horizon when the Sun is below, during the morning hours till the 9th, and after the 24th; and during the evening hours after the 16th.

She is near Venus on the 8th; Jupiter and Mercury on the 12th; Mars on the 13th; Uranus on the 24th; and Saturn on the 24th.

She is at her greatest north declination on the 2nd; crosses the Equator on the 9th; reaches her greatest south declination on the 15th; is again on the Equator on the 22nd; and a second time at her greatest north declination on the 29th.

MERCURY is in the constellation Libra till the 10th; in Scorpio till the 15th; and in Serpentarius till the end of the month. He rises after the Sun throughout the month, and sets after him. He sets on the 1st at 4h. 46m.; on the 9th, at 4h. 39m.; on the 18th, at 4h. 40m.; and on the last day, at 4h. 55m. These times follow the setting of the Sun by 14 minutes on the 1st, increasing slowly to one hour on the last day. With the exception of the lest few days of this month, he is badly situated for seeing him. He sets within a few degrees of the N.W. by W. point of the horizon throughout the month; during the month he is moving eastward among the stars. He is near Beta Scorpio on the 10th, and Antares on the 15th; is in aphelion on the 4th; is near Jupiter on the 9th; the Moon on the 12th; and Mars on the 19th. For his path in the heavens, and relative position to the stars, see the diagram in December.

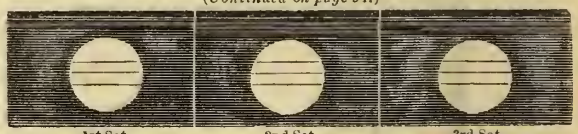
VENUS is in the constellation Virgo throughout the month. She is a morning star, and rises on the 2nd, at 2h. 46m. A.M; on the 15th, at 3h. 21m. A.M.; and on the last day, at 4h. 0m. A.M.; near the E. at the beginning, and near the E. by S. points towards the end of the month. She is moving eastward among the stars; is near the Moon on the 8th; and is in perihelion on the 17th.

MARS is in the constellation Scorpio throughout the month. He is an evening star, and sets on the 1st, at 5h. 21m. P.M., and on the last day at 4h. 39m. P.M.; near the S.W. by W. points of the horizon at the beginning, and near the S.W. at the end of the month. He is badly situated for observation. His motion among the stars is eastward; and he is near the Moon on the 13th. His path in the heavens, and relative position to the large stars near him, are shown in the diagram in March.

JUPITER is in the constellation Libra till the 11th; and in Scorpio till the end of the month. He is situated near the Sun, and badly for observation throughout the month: he is near the Moon on the 12th.

JUPITER'S SATELLITES.—The satellites are invisible, on account of the planet being too near the Sun.

(*Continued on page 54.*)



1st Sat. 2nd Sat. 3rd Sat.

TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.

Days of the Month.	Mercury. Aftern.	Venus. Morning.	Mars. Aftern.	Jupiter. Aftern.	Saturn. Morning.	Uranus. Aftern.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	0 17	9 2	1 12	1 2	Aftern.	11 31
6	0 29	9 4	1 8	0 47	11 46	11 11
11	0 40	9 6	1 4	0 32	11 24	11 50
16	0 52	9 8	1 0	0 17	11 3	10 30
21	1 3	9 11	0 56	Morn.	10 42	10 10
26	1 14	9 13	0 52	11 47	10 21	9 49
30	1 20	9 16	0 50	11 35	10 4	9 33

JUPITER'S SATELLITES.

Satellites invisible this Month.

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
30 Piscium	4½	21 1 11 A.M.	Dark	8° S. & 77° N.
Epsilon Tauri	3½	26 8 57 P.M.	Bright	N. of 7°
		26 10 11 P.M.	Bright	N.
Omicron Tauri	5	28 1 57 A.M.	Bright	N. of 9°
		28 3 6 A.M.	Dark	N.
3 Geminorum	6	28 7 55 P.M.	Bright	7° & 74°
		28 8 28 P.M.	Dark	N.

TIMES of CHANGES of the MOON, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
LAST QUARTER...	5	0	41	A.M.
NEW MOON ...	11	4	41	P.M.
FIRST QUARTER	18	2	27	P.M.
FULL MOON ...	26	6	41	P.M.
PERIGEE ...	11	8	0	A.M.
APOGEE	24	4	0	A.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

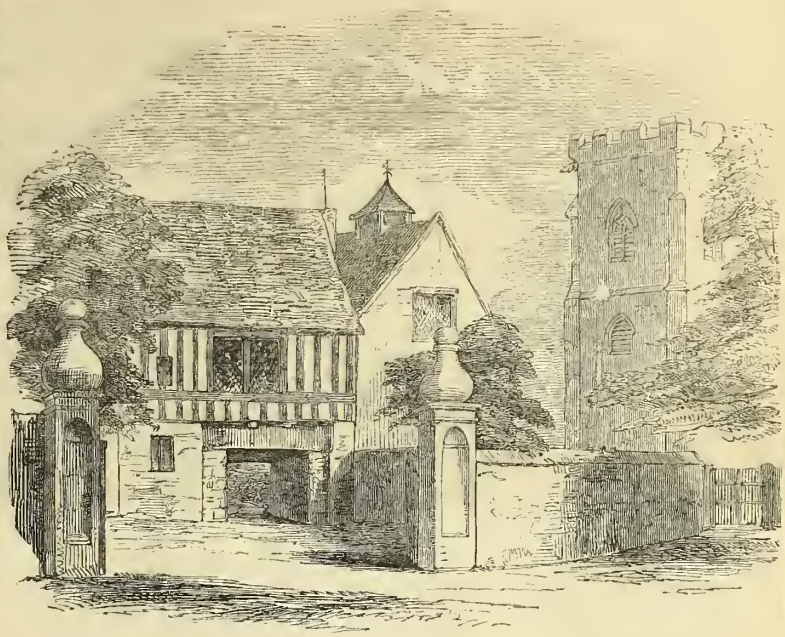
Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars. Right Ascension.	Mars. North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	15 1	107 57	11 50	87 29	15 56	110 58	15 46	109 12	2 53	76 11	2 17	76 49	22 35	99 54
6	15 32	110 28	12 11	89 33	16 11	111 43	15 50	109 26	2 51	76 18	2 16	76 53	22 34	99 55
11	16 3	112 33	12 33	91 41	16 27	112 22	15 55	109 41	2 49	76 24	2 15	76 56	22 34	99 55
16	16 35	114 10	12 55	93 50	16 43	112 57	15 59	109 55	2 48	76 31	2 15	77 0	22 34	99 55
21	17 6	115 16	13 17	96 0	16 59	113 25	16 4	110 8	2 46	76 37	2 14	77 4	22 34	99 55
26	17 36	115 48	13 40	98 9	17 15	113 48	16 10	110 24	2 45	76 43	2 13	77 7	22 34	99 95
30	17 58	115 48	13 58	99 50	17 28	114 2	16 13	110 34	2 44	76 48	2 13	77 10	22 34	99 55

NOVEMBER.

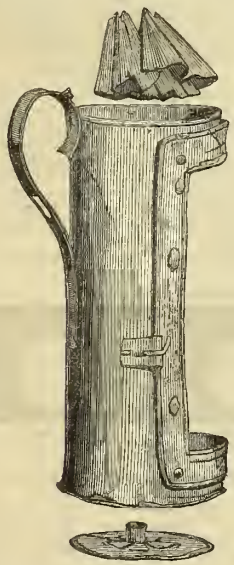
GUNPOWDER PLOT, NOVEMBER 5, 1605.

At Ashby St. Leger, near Daventry, remains to this day the gatehouse of the ancient manor of the Catesby family, of whom Robert Catesby was the contriver of the Gunpowder Plot, and is stated to have inveigled, by his persuasive eloquence, several of the other twelve conspirators. They are believed to have met in the room over the gateway, seen in the accompanying view, and the apartment is by the villagers of the neighbourhood called the "Plot Room." Of the thirteen conspirators, five only were engaged in the plot at its commencement; four (probably six) had at one time been Protestants; some took no active part, but furnished part of the money; and three Jesuits, who were privy to the design, counselled and encouraged the conspirators. Catesby was shot with Thomas Percy, by the sheriffs' officers, in attempting to escape at Holbeach, shortly after the discovery of the treason.

Guido or Guy Fawkes was a soldier of fortune in the Spanish service; he was a native of Yorkshire, and a schoolfellow of Bishop Morton, at York. In the Bodleian Library, at Oxford, are preserved the rusty and shattered remains of the Lantern which Fawkes carried when taken prisoner. It is of iron, and a dark lantern; the movement for inclosing the light being precisely the same as in those in use at the present day: the top, squeezed up and broken, is preserved with it in the case, as is also the socket for the candle. The horn or glass which once filled the door is quite gone. On a brass plate affixed to one side of the Lantern, the following Latin inscription is engraved in script hand:—



CATESBY HALL GATEWAY, ASHBY ST. LEGER.



GUY FAWKES' LANTERN, IN THE BODLEIAN LIBRARY, OXFORD.

"Laterna illa ipse quæ usus est et cum quâ deprehensus Guido Faux in Cryptâ subterraneâ ubi domo Parlamenti diffianda operam dabat. Ex dono Rob. Heywood, nuper Academia procuratoris, Apr. 4°, 1641." And the following is written on a piece of paper, and deposited in the glass case with the Lantern, along with two or three prints and papers relating to the Powder Plot:—

"The very Lantern that was taken from Guy Fawkes when he was about to blow up the Parliament House. It was given to the University in 1641, according to the inscription on it, by Robert Heywood, Proctor of the University."

LANDING OF KING WILLIAM III., NOVEMBER 4, 1688.

Between Chesterfield and Dronfield is a small public-house, where, in 1688, certain patriotic noblemen met to concert measures for overthrowing the Popish government, and securing the Protestant establishment by the personal influence of the Prince of Orange. The sign of the public-house was then the Cock and Pynot, now the Cock and Magpie. In the annexed representation, the second window to the right of the door belongs to the room where the patriots met, and is now called the "Plotting Parlour;" there is preserved the chair in which sat the Earl of Devonshire, the president. In 1788, the centenarial day was kept with great pomp by the nobility, gentry, and people of the neighbourhood, who visited the Revolution Parlour, and proceeded from thence in grand procession to Chesterfield. The public-house was sold in 1847, for £735.

"THE REVOLUTION HOUSE," AT WHITTINGTON, DERBYSHIRE.

DECEMBER, 1852.

M D	W D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN. Rises.	SUN. Souths. Before 12 o'Clock.	SUN. Souths. Height above horizon	SUN. Sets.	MOON. Rises. Aftern.	MOON. Souths. Morning.	MOON. Souths. Height above horizon	MOON. Sets. Morning.	Moon's Age.	HIGH WATER at London Bridge. Morning.	HIGH WATER at London Bridge. Aftern.	Day of the Year.
			H. M.	M. S.	Deg	H. M.	H. M.	H. M.	Deg.	H. M.		H. M.	H. M.	
1	W	Pallas in conjunction with Omicron Virginis.	7 45	10 36	16½	3 52	8 2	3 23	58¾	11 41	20	4 30	4 50	336
2	Th	Ceres in conjunction with Zeta Virginis at 6h A.M.	7 47	10 13	16½	3 52	9 14	4 15	55¼	Aftern.	21	5 10	5 30	337
3	F	Mercury in conjunc. with Lam. Sag. at 8h 45m P.M.	7 48	9 49	16¼	3 51	10 31	5 7	50¾	0 44	22	5 55	6 20	338
4	S	Fomalhaut souths 5h 55m, at an altitude of 8° 7′	7 50	9 24	16¼	3 50	11 49	5 57	45½	1 7	(	6 45	7 15	339
5	☽	2ND S. in ADVENT	7 52	8 59	16	3 50	Morning.	6 47	39½	1 27	24	7 50	8 25	340
6	M	*Nicholas*	7 53	8 34	16	3 50	1 9	7 36	33¼	1 47	25	9 10	9 40	341
7	Tu	Alpha Andromedæ souths 6h 54m, alt. 66° 48′	7 54	8 8	15¾	3 50	2 32	8 27	27¼	2 8	26	10 20	10 50	342
8	W	Conc. of B. V. M.	7 55	7 41	15¾	3 50	3 57	9 19	22	2 28	27	11 25	11 50	343
9	Th	Day breaks 5h 51m	7 56	7 14	15½	3 49	5 25	10 15	17½	2 55	28	No Tide.	0 20	344
10	F	Sun eclipsed, invisible at Greenwich.	7 57	6 46	15½	3 49	6 51	11 14	14¾	3 29	29	0 45	1 10	345
11	S	Mars in conjunction with the Moon at 11h 5m P.M.	7 58	6 18	15½	3 49	8 14	Aftern.	13½	4 11	○	1 30	2 0	346
12	☽	3RD S. in ADVENT	7 59	5 50	15¼	3 49	9 28	1 18	14	5 7	1	2 25	2 50	347
13	M	*Lucy.* Twilight ends 5h 56m	8 0	5 22	15¼	3 50	10 27	2 19	16¼	6 15	2	3 10	3 35	348
14	Tu	Length of night 16h 11m	8 1	4 53	15¼	3 50	11 10	3 16	19¾	7 28	3	4 0	4 20	349
15	W	Ember Week	8 2	4 23	15¼	3 50	11 42	4 9	23¾	8 43	4	4 45	5 5	350
16	Th	*O Sapientia!* Ca.	8 2	3 54	15¼	3 50	Aftern.	4 57	28½	9 57	5	5 30	5 55	351
17	F	Ox. T. ends [T. e.	8 3	3 25	15	3 51	0 27	5 42	33½	11 7	6	6 20	6 45	352
18	S	Capella souths 11h 15m, at an altitude of 84° 22′	8 4	2 55	15	3 51	0 44	6 24	38½	Morning.	☽	7 10	7 35	353
19	☽	4TH S. in ADVENT	8 5	2 25	15	3 51	0 59	7 5	43½	0 18	8	8 5	8 35	354
20	M	Length of day 7h 46m	8 5	1 55	15	3 51	1 15	7 46	48¼	1 24	9	9 10	9 45	355
21	Tu	*St. Thomas*	8 6	1 25	15	3 52	1 31	8 27	52¾	2 31	10	10 15	10 50	356
22	W	Shortest Day	8 6	0 55	15	3 52	1 49	9 10	56½	3 36	11	11 20	11 45	357
23	Th	Length of day 7h 46m	8 7	0 25	15	3 53	2 11	9 55	59½	4 45	12	No Tide.	0 10	358
24	F	Day breaks 6h 2m	8 7	After 12 o'clock	15	3 53	2 37	10 42	61½	5 52	13	0 35	0 55	359
25	S	CHRISTMAS DAY	8 7	0 34	15	3 54	3 11	11 32	62¼	6 58	14	1 15	1 35	360
26	☽	1ST S. aft. CHR. *St.*	8 7	1 4	15	3 55	3 55	Morning.		8 1	●	1 50	2 10	361
27	M	*St. John* [*Stephen*	8 8	1 34	15¼	3 57	4 49	0 25	61½	8 56	16	2 30	2 50	362
28	Tu	*Innocents*	8 8	2 3	15¼	3 58	5 53	1 19	59¾	9 43	17	3 5	3 25	363
29	W	Venus in conj. with Psi Ophiuchi	8 8	2 32	15¼	3 58	7 4	2 12	56½	10 20	18	3 45	4 5	364
30	Th	Sun in perigee at 4h 36m P.M.	8 8	3 1	15½	3 58	8 19	3 4	52¼	10 49	19	4 22	4 40	365
31	F	*Silvester*	8 8	3 30	15½	3 59	9 37	3 55	47	11 14	20	5 0	5 25	366

DURATION OF MOONLIGHT. Before Sunrise. O'Clock. 2h. 4h. 6h. After Sunset. O'Clock. 6h. 8h. 10h.

DECEMBER.

EARTH is again in fetters at thy shrine:
Again, thou conquering Winter; and, with veins
By thy enchantment frozen into chains,
Owns in still patience, King, that she is thine.
There while she lies, expectant of the sign
Of freedom, 'tis her children's nobler part
To mock thy magic. Now, should every heart
Beat warmer, kindlier. Pour the festive wine,
And spread the glittering board, all mindful still
To help the helpless. Strive, as in you lies,
The feeble spirit with strong hope to buoy;
Control with sterner hand the oppressor's will;
Rescue the erring, dry the orphan's eyes,
And cause the widow's heart to sing for joy.

B.

WELCOME, old month of noisy feast and "mime,"
Jovial December! How we bless thy reign!
What though thy locks be strewn with winter's rime,
Though o'er thy pathway pinching gales complain?—
Here is thy home; here at each household hearth,
Where foaming cups are drain'd in love to thee!
When "festal boards" shall "groan" thy praises forth,
And "jest," and "game," and "dance" "go merrilie"!
Bright shines the holly in the "homestead's" blaze,
Sweet flows the "junket" at their peasant meal;
But 'neath thy "Druid plant" glance brighter rays,
And sweeter still "the kiss" some deftly steal!
Chime on, glad bells! foam on, rich cups around!
Blessings are ours, and joyful hearts abound!

K.

DECEMBER.

PATH OF MERCURY FROM JULY 30, 1852, TILL JANUARY 21, 1853.

Scale 24 degrees to one inch. Stars of the First Magnitude have 8 Petals; those of the Second 7; the Third 6, &c.

THE SUN is situated south of the Equator; on the 21st day attains his extreme south position. From the 22nd he is moving northward. He is passing from the sign Sagittarius (the Archer,) to that of Capricornus (the Goat,) completing the tropical year on the 21st day, 3 hours, 13 minutes, P.M., having been in the former sign 29 days, 12 hours, 48 minutes. On the 1st day he is 93,621,300 miles from the Earth, decreasing to 93,403,000 miles on the 31st.

He rises at the beginning at 2°, and about the 20th at 5° S. of the S.E. by E. His meridian altitude and time of southing are daily shown in the Calendar pages. On December 11, there will be an Eclipse of the Sun, but it will not be visible here; it will be visible in the North Pacific Ocean.

On the 1st, the Moon is in the constellation Cancer; on the 2nd, enters Leo; on the 4th, Virgo, where she remains until on the 8th she passes into Libra; on the 9th, into Scorpio; on the 10th, into Serpentarius and the Milky Way; on the 11th, into Sagittarius and the Milky Way again. On the 13th she enters Capricornus; on the 15th, Aquarius; on the 17th, Pisces; on the 18th, Cetus, and on the 20th, Pisces; on the same day re-enters Cetus; on the 22nd she is in Aries and Taurus, and on the 26th passes into Gemini and the Milky Way; on the 28th, is in Cancer; on the 29th is in Leo, in which constellation she remains until the end of the month.

She is above the horizon when the Sun is below, during the morning hours till the 8th; and after the 23rd, and during the evening hours, from the 16th.

She is near Venus on the 8th; Jupiter on the 10th; Mars on the 11th; Mercury on the 12th; Uranus on the 21st, and Saturn on the 22nd. On December 26, there will be a partial Eclipse of the Moon, but which is not visible here; the middle of the eclipse takes place at 1h. 3m. P.M.

She is on the Equator on the 6th; at her greatest south declination on the 12th; again on the Equator on the 19th; and at her greatest north declination on the 27th.

MERCURY is in Sagittarius throughout the month; he rises after the Sun till the 20th, and before him after that date; he sets after the Sun till the 20th, and before from the 21st; he sets on the 1st at 4h. 57m.; on the 6th at 5h. 2m.; on the 9th at 5h. 1m.; on the 12th at 4h. 56m.; on the 18th at 4h. 22m., and at the same time as the Sun on the 21st. The intervals of time after sunset are 1h. 5m. on the 1st, increasing to 1h. 11m. on the 6th, and decreasing from the 9th to 53m. on the 15th; and to 32m. on the 18th.

He rises on the 22nd at 7h. 31m.; on the 25th at 7h. 1m.; the 28th at 6h. 39m., and on the 31st at 6h. 26m., and these times precede sunrise by 35 minutes on the 22nd to 1h. 43m. on the last day. This planet is therefore favourably situated for seeing him during the hour following sunset, at the beginning of the month, and situated between the S.W. and the S.W. by W. point of the horizon; and again a little before sunrise at the end of the month, and situated near the S.E. by E. point of the horizon. He is moving eastward among the stars till the 10th; is stationary on the 11th; is moving westward among them till the 30th, and is stationary again on the 31st. He is at his greatest elongation east, on the 2nd; is near the Moon on the 12th; Mars on the 16th; is in Perihelion on the 18th, and is in inferior conjunction with the Sun on the 20th. For his path in the heavens and relative position among the stars see the above diagram.

VENUS is in the constellation Virgo till the 7th; in Libra till the 27th, and in Scorpio till the end of the month; she is a morning star; rises on the 2nd at 4h. 6m. A.M.; on the 16th at 4h. 47m. A.M., and on the last day at 5h. 30m. A.M.; at the E.S.E. on the 9th; and at the S.E. by E. towards the end of the month; she is moving eastward among the stars, and is near the Moon on the 8th.

MARS is in the constellation Serpentarius throughout the month. He is

(*Continued on page 54.*)

RELATIVE POSITIONOF EACH SATELITE TO JUPITER AT THE TIME OF ECLIPSE.

Days of the Month.	TIMES OF THE PLANETS SOUTHING, OR PASSING THE MERIDIAN.						JUPITER'S SATELLITES.	
	Mercury. Aftern.	Venus. Morning.	Mars. Aftern.	Jupiter. Morning	Saturn. Aftern.	Uranus. Aftern.	Eclipses of 1st Satellite. Disappear.	
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	d. h. m.	
1	1 21	9 16	0 49	11 32	10 0	9 29	30 6 58 A.M.	
6	1 21	9 20	0 46	11 17	9 39	9 9		
11	1 8	9 24	0 43	11 2	9 18	8 49		
16	0 37	9 28	0 40	10 47	8 58	8 28		
21	Morn.	9 33	0 37	10 32	8 37	8 8		
26	11 7	9 38	0 34	10 17	8 17	7 48		
31	10 40	9 44	0 31	10 1	7 56	7 28		

OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance & re-appearance of the Star	At which limb of the Moon	Between what Latitudes visible.
		d. h. m.		
Nu Virginis	4½	5 3 20 A.M.	Bright	All N of
		5 4 12 A.M.	Dark	Equator
Tau 1 Tauri	6	16 5 8 P.M.	Dark	32° & 75°
		16 5 24 P.M.	Bright	N.
Tau 2 Aquarii	5½	16 6 14 P.M.	Dark	8° & 70°
		16 7 26 P.M.	Bright	N.
1 Geminorum	5	26 1 49 A.M.	Bright	8° S. &
		26 2 11 A.M.	Bright	53° N.

TIMES of CHANGES of the MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	d.	h.	m.	
LAST QUARTER...	4	0	22	P.M.
NEW MOON ...	11	3	32	A.M.
FIRST QUARTER	18	8	39	A.M.
FULL MOON ...	26	1	10	P.M.
PERIGEE ...	9	6	0	P.M.
APOGEE	21	6	0	P.M.

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE PLANETS WHEN ON THE MERIDIAN; ASTRONOMICAL TIME.

Days of the Month.	Mercury. Right Ascension.	Mercury. North Polar Distance.	Venus. Right Ascension.	Venus. North Polar Distance.	Mars Right Ascension.	Mars North Polar Distance.	Jupiter. Right Ascension.	Jupiter. North Polar Distance.	Saturn. Right Ascension.	Saturn. North Polar Distance.	Uranus. Right Ascension.	Uranus. North Polar Distance.	Neptune. Right Ascension.	Neptune. North Polar Distance.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m	° ′	h. m.	° ′
1	18 3	115 44	14 2	100 15	17 31	114 5	16 14	110 36	2 43	76 49	2 12	77 11	22 35	99 54
6	18 23	115 5	14 26	102 16	17 48	114 15	16 19	110 48	2 42	76 54	2 12	77 13	22 35	99 53
11	18 30	113 58	14 49	104 12	18 4	114 19	16 24	111 0	2 41	76 58	2 11	77 16	22 35	99 52
16	18 18	112 32	15 14	105 59	18 21	114 16	16 28	111 10	2 40	77 1	2 11	77 18	22 35	99 50
21	17 46	110 49	15 38	107 38	18 38	114 6	16 33	111 20	2 39	77 4	2 10	77 20	22 35	99 47
26	17 25	110 4	16 4	109 5	18 55	113 49	16 38	111 30	2 38	77 6	2 10	77 22	22 36	99 45
31	17 20	110 16	16 29	110 19	19 11	113 26	16 42	111 39	2 38	77 7	2 10	77 23	22 36	99 43

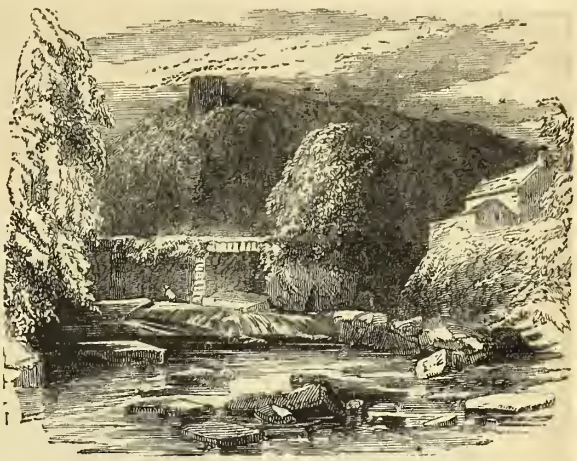
DECEMBER.

THE EARL OF DERWENTWATER EXECUTED FOR HIGH TREASON, DECEMBER 8, 1746.

The fortunes of the ill-fated Earl of Derwentwater, who devoted himself to a fallen cause, urged by a principle, and paid the penalty upon the scaffold, on Tower-hill, have scarcely at this day ceased to be deplored in Northumberland; whilst the melancholy event is kept in memory by the desolated Hall of Dilston, the seat of the unfortunate nobleman. It is situated about two miles distant from Hexham, in Northumberland, on an eminence at the entrance to a deep woody dell, near the confluence of the Devil-water and the river Tyne. The Hall was rebuilt in 1768, but has fallen to ruin, with the exception of the chapel belonging to it, which is kept in repair, and whose vault contains the remains of the Radcliffe family. Strange tales have mixed themselves with the superstitions of the simple inhabitants of the Devil-water, and the neighbourhood of Corbridge, relating to the portents which accompanied the death of the unfortunate nobleman, and the downfall of an ancient family; and the aurora borealis, which made an extraordinarily vivid appearance in Northumberland on the night of the execution, is still called by the old people *Lord Derwentwater's corpse lights*. The Earl was denied his last request, to be laid with his ancestors; embodied in a ballad well known in the north country as "Derwentwater's Farewell:"—

"Albeit that here in London town
It is my fate to die,
Oh, carry me to Northumberland,
In my father's grave to lie.
There chant my holy requiem
In Hexham's holy towers,
And let six maids of fair Tynedale
Scatter my grave with flowers."

And his remains were ostensibly interred in the churchyard of St. Giles'-in-the-Fields, where there is a stone to his memory, on the north side of the churchyard, not far from the tomb of the Pendrells, celebrated for their devotion to an earlier member of the Stuart family, in whose cause the Earl fell a sacrifice. (See *Sketches of Northumbrian Castles, &c.*, by W. F. S. Gibson, Esq., F.S.A., Second Series.)



REMAINS OF DILSTON HALL, THE SEAT OF THE LAST EARL OF DERWENTWATER, NORTHUMBERLAND.

SIR ISAAC NEWTON BORN DECEMBER 25, O.S., 1642.

In the stone-built manor-house of Woolsthorpe, eight miles south of Grantham, Lincoln, was born the illustrious Newton, whose fame will last as long as the earth shall endure. At his birth he was so little that he might have been put into a quart mug. When Dr. Stukeley visited the house in 1727, he was shown Sir Isaac's study, the book-shelves in which were his own making, being pieces of deal boxes. The premises were repaired in 1798 by Mr. Turner, then the proprietor, by whom also a marble tablet was placed over the mantelpiece of the room in which Newton was born,—on the first floor, left of the staircase. It bears the inscription—"Sir Isaac Newton, son of Isaac Newton, lord of the manor of Woolsthorpe, was born in this room, on the 25th of December, 1642." At the foot are the lines from Pope:—

"Nature and Nature's laws lay hid in night;
God said, 'Let Newton be,' and all was light."

In a room on the same floor is preserved the oaken study; two dials are engraved upon the southern wall, but the styles are wanting. The celebrated apple-tree, the fall of one of the apples of which is said to have turned the thoughts of Newton to the subject of gravitation, was blown down by the wind about 16 years since; but another tree was grafted on its stock.

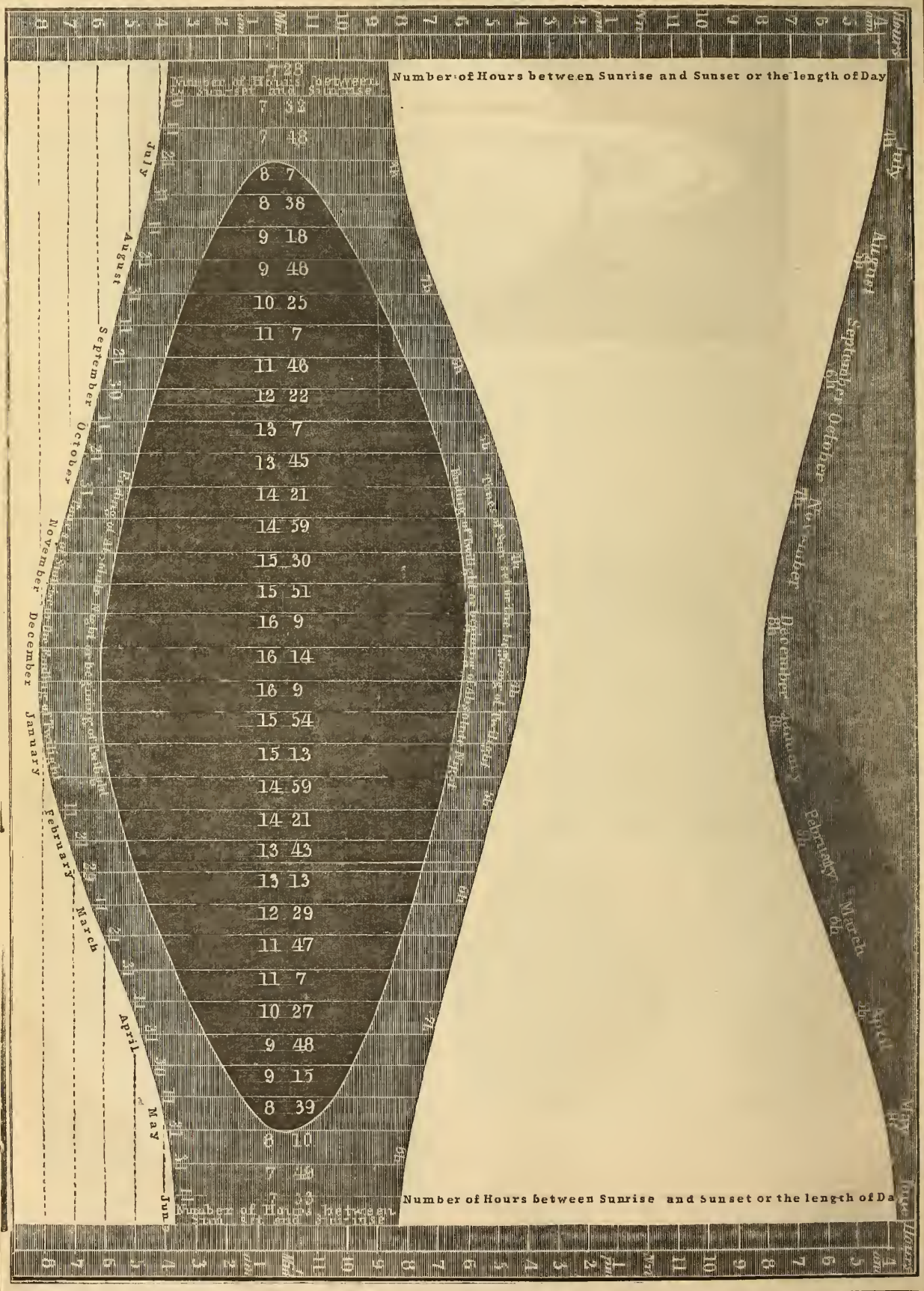
VIRGIN AND CHILD, (BYZANTINE SCHOOL.)

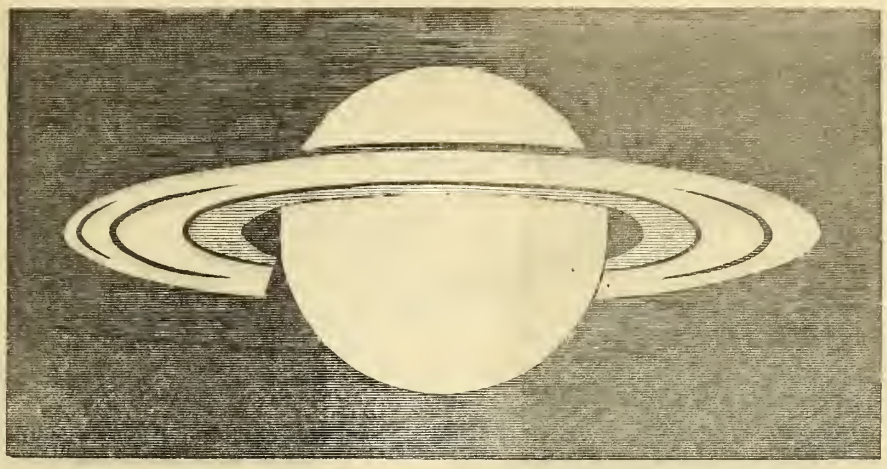
THE NATIVITY.

The Nativity has been variously commemorated by the early Christian artists. The specimen here engraved is from the Byzantine class, which comprises productions of Eastern art, between the tenth and thirteenth centuries. The present picture is in the Wallerstein Gallery; the master is, of course, unknown: it represents a Virgin and Child, of a peculiar treatment, the drapery consisting entirely of black, edged with red, and heightened with gold. The usual monogrammatic contractions are introduced in the back of the picture, and both figures have *nimbi*. The painting is round and soft, and deeply-toned in the flesh-tints

BIRTH-PLACE OF SIR ISAAC NEWTON, WOOLSTHORPE MANOR-HOUSE, LINCOLNSHIRE.

A D IAGRAM, SHOWING THE TIMES OF SUNRISING AND SETTING, THE LIMITS OF TWILIGHT, THE LENGTHS OF DAY AND NIGHT, ETC., FOR THE WHOLE YEAR, ADAPTED TO THE LATIUDE OF LONDON AND ADJACENT PLACES, FOR THE YEAR 1852.





Explation of Diagram on the opposite page.

THE numbers in the boundary columns, on either side, show the hour of the day; those placed on the upper line of sun-rising, and near the names of the months at the top of the diagram, show the hour of sunrise; those placed near the line of sunset show the times of sun-setting, or beginning of twilight, the limits of which are shown by the boundary-line of the dark oval figure, indicative of the length of absolute night at the different seasons of the year; those numbers on the lower line of sunrise show the days of the month; and the dotted lines below the diagram, joining the numbers on either side with the boundary-line, indicate the times of sunrise, as similar lines, drawn from the other numbers to the place of the other phenomena, indicate the times of their occurrence. This diagram, by mere inspection, gives the times of sun-rising and setting, the length of day and night, with the duration of twilight. The numbers which are written over the lines, in the period of night, show the number of hours the Sun is below the horizon on that day. Thus, 7h. 28m., the first number on the diagram, shows that the Suo, on June 21, is 7h. 28m. below the horizon; and if this number be taken from 24 hours, the difference, namely, 16h. 32m., gives the number of hours the Sun is above the horizon, or the length of the day; and in this way the length of both day and night can readily be found, throughout the year.

ON THE PLANET SATURN.

TOWARDS the close of last year, and the commencement of the present, great interest was excited by the discovery of an additional *inner* ring to Saturn. The following letter was published at the time of its discovery by Mr. Bond, of Cambridge, United States:—

"*Discovery of a third ring round the Planet Saturn*," *Dec.* 3, 1850.

"Letters received from Boston, by the *Africa*, announce the discovery, on the night of the 15th ultimo, of a third ring round the planet Saturn—a phenomenon which had for some time been suspected. It was announced that this important fact was ascertained by the astronomer at the Observatory at Cambridge (U.S.A.). It is interior to the two others, and therefore its distance from the body of the planet must be small. It was well observed through the great equatorial, with powers varying from 150 to 900; the evening for astronomical observations was remarkably fine, perhaps the finest since the establishment of the observatory, although singularly enough the sky was so hazy, that to the naked eye only the brighter stars were visible. It will be remembered, that the eighth satellite of this planet was also discovered at Cambridge, by Mr. Bond, about two years since."

This discovery has been subsequently confirmed, by various observations—those made by the Rev. W. R. Dawes, and published in the Proceedings of the R.A.S. are subjoined.

Mr. Dawes observes:—"After the re-establishment of my observatory at my present residence, until the last week in November, the state of the air was very unfavourable for observation. During that week, and the first of this month, some good opportunities have occurred; and I beg leave to lay before the Royal Astronomical Society a few extracts from my observatory journal, relating to the telescopic appearances of the ring of Saturn, which have been in some respects remarkable.

"1850, Nov. 23.—With 8½ foot equatorial refraction. *Saturn*—power 125. Very brilliant and sharply defined. Now and then fancied a faint lucid point near the following arm of the ring; but it was not satisfactorily verified with 425. While looking steadily at it (with power 425), some very good views of the planet occurred, and, I sometimes suspected that the outer ring had a short and narrow line upon it near its extremity. On scrutinising the preceding arm I occasionally obtain the same impression.

"The following morning I received a letter from Mr. Lassell, dated Nov. 22, in which he says:—'Last night, in about a single hour of fine sky, I was favoured with a view of Saturn, accompanied by his eight satellites; some of them in trying positions.' Mr. Lassell adds: 'I had repeated impressions of a secondary impression; and if it be real, it is one-third of the breadth of the outer ring from its outer edge. The suspicion was the same from both ansæ. Powers from 219 to 614; full aperture always—viz., 24 inches.'"

"To proceed with the extracts from my journal:—

"Nov. 25.—Clear night, and occasionally telescopic vision. *Saturn*, with 282. I was satisfied that, in finest moments, a very narrow and short line was discernible on the outer ring, near its extremities, which was confirmed with power 425, with which the phenomena of the planet were better brought out.

"November 29—Sharp frost, clear day. Saturn, 6h. 45m. G.M.T. Having applied high powers, and viewed the planet steadily for a considerable time, I obtained several satisfactory glimpses of a division near the extremity of the outer ring. It was occasionally seen with power 323, but far more certainly with 460. After a few seconds of uncommonly sharp vision, I involuntarily exclaimed '*obvious*.' There is a *shading* like *twilight*, at the inner portions of the inner ring. 7h. 30m., on looking again at *Saturn*, power 460. I am struck with the beauty of the image, and get frequent glimpse of the division in the outer ring. It is improved by a little illumination of the field, and is usually rather best seen at the *following* extremity.

"8h. 40m. Examined *Saturn* with the Dollond micrometer and Barlowlens, power 375. Vision is occasionally fine. At times I am pretty sure of the lines on the extremities of the outer ring; but rather most so on the *following* side. The preceding extremity seems rather more dusky than the following one, and scarcely so distinct. There is an exceedingly narrow black line on the ball at the *southern* edge of the ring where it crosses the planet; and it is slightly broader at the east and west edges of the ball than near its middle. It is, perhaps, one-third of the breadth of the shadow of the ring on the ball to the *north* of the ring. What can it be? It looks like a shadow; but how can the shadow of the ring be visible both on the north and south sides of it?

"8h. 55m. The interior portion of the inner ring is rather *suddenly* shaded off, and, towards the inner *edge*, scarcely reflects sufficient light to be always sure of its outline. It has struck me, that the dark line which I see at the southern edge of the ring, where it crosses the ball, is nothing else but this shaded, or rather *unreflective*, portion of the ring, which at this part is projected into a very narrow line; but it certainly appears to widen a little towards the edges of the ball. On further consideration, I believe this must be the true explanation of this narrow dark line, which I cannot otherwise account for. The dusky portion of the inner ring, which I have particularly described and recorded to-night, I saw very well, and precisely in the same way, on the 25th. Its appearance is very much like that of a dull, unreflective portion of the Moon, when the Sun is shining upon it very obliquely. I think its breadth is rather less than that of the inner portion of the outer ring.

"On Dec. 2nd, I was favoured with a visit from Mr. Lassell, and the evening of the 3rd proving fine, the telescope was turned upon *Saturn*. A wheel of convex lenses, made by Dollond for Mr. Lassell, was applied to the telescope, and with these the planet was subjected to a careful scrutiny. Immediately after which, Mr. Lassell made the following entry in my Observatory Journal, accompanied by a sketch of the planet:—'1850. Tuesday, Dec. 3rd, 9h. 15m. G. M. T. *Saturn*. 8½ foot achromatic; powers, 298 and 363. I find I cannot do justice to the view of the planet; but the phenomenon which struck me as most peculiar was, that the space between the inner diameter of the inner ring and the ball was bisected, or rather, half covered, by an appearance as if a crape veil had been thrown over it. There is a dark inner edge to the bright ring, which shades off a little; the dark ring is then of a uniform grey colour; the sky is seen black between Bond's ring and the planet. The belt on the equator of Saturn was ruddier than the southern portion, but scarcely more marked, there being a most striking difference of colour between the whole district south of the northern edge of the belt, and the portion north of that line. I am not certain that I saw any secondary division of the ring. A minute dark line or shadow I also observed running along the southern edge of the ring, where it crossed the front of the ball; and this line was rather broader at its ends, projected on the limbs of Saturn, than in the middle.

"'Dec. 5th, at 7h. G. M. T. Generally starlight, but rather hazy and dull. *Saturn*. The haze is rather too thick for the use of high powers, but during clearer moments 323 is borne very well; and the definition, though variable, is at times very good. The *obscure ring* is occasionally well seen. I get an impression of a dark shade immediately in contact with the bright ring, but not amounting to black, and certainly not so black as the principal division in the ring; yet it is, I think, nearly as broad. Then comes a faintly illuminated ring, concentric with the bright one. Its breadth is about equal to the inner portions of the outer ring.

"'7h. 30m. The planet is a little clearer, and bears 460 very well. With this power, by occasional good views, the phenomena came out more decidedly than with 323. I cannot distinctly make out any division in the outer ring. On comparing the breadth of the obscure portion of the inner ring, as seen at the ansæ, it seems to agree, in its proportions, with the elliptic form of the ring; and I cannot doubt that it is that obscure portion projected on the ball.'"

A sketch, by Mr. Dawes, of the appearance of the planet and its rings, as subsequently seen by him, is represented in the annexed woodcut.

The following small Planets are in Opposition to the Sun during the year 1852.

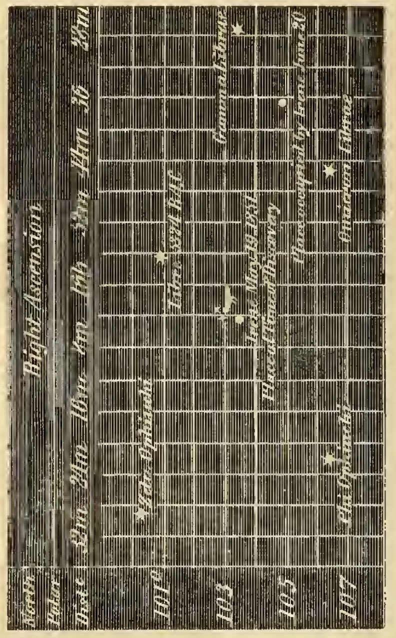
FLORA, on March 1st, souths at 2h. 14m. A.M., at an altitude of 42½°; on the 15th, at 1h. 6m. A.M., at an altitude of 44° 20′; on the 24th she is in opposition to the Sun, and souths at an altitude of 45½°; on April 10th, she souths at 10h. 57m. P.M., at an altitude of 47¼°.

JUNO, on September 1st, souths at 1h. 43m. A.M., at an altitude of 39° 38′; on the 15th, at 0h. 42m. A.M., at an altitude of 36° 50′; on September 24th, she is in opposition to the Sun, and souths at an altitude of 34° 49′; on the last day, she souths at 11h. 29m. P.M., at an altitude of 33½°, and on October 15th, she souths at 10h. 21m. P.M., at an altitude of 30½°.

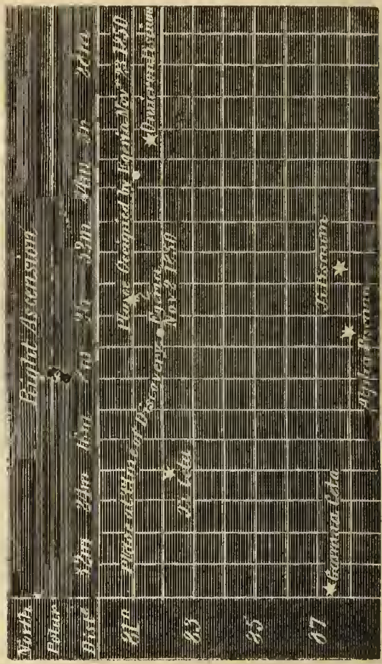
VESTA, on October 1st, souths at 2h. 36m. A.M., at an altitude of 46¼°; on the 15th, at 1h. 34m. A.M., at an altitude of 45½°; on November 3rd, she is in opposition to the Sun, and souths at an altitude of 44°; on the 15th, she souths at 10h. 56m. P.M., at an altitude of 43½°; and on the last day, at 9h. 5m. P.M., at an altitude of 43½°.

DISCOVERY OF TWO NEW PLANETS IN THE YEAR 1851.

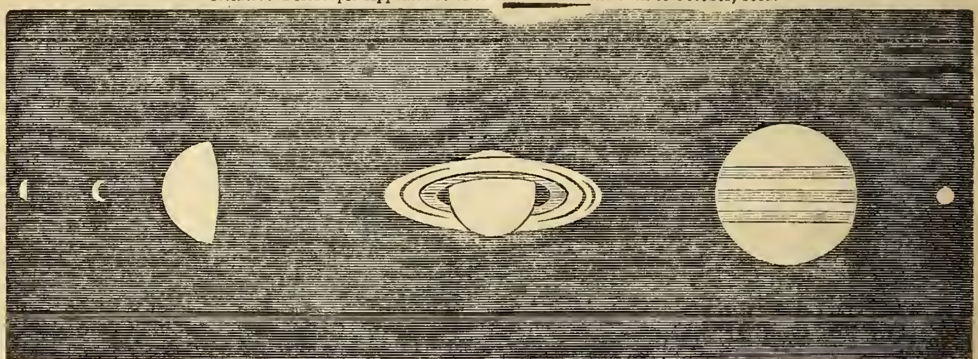
Place in the Heavens occupied by the New Planet Irene, on its discovery by Mr Hind, on May 19, 1851.



Place in the Heavens occupied by the New Planet Egeria, on its discovery by Dr. Annibal de Gasparis, on November 2, 1850.



Relative Telescopic Appearance of the Planets on the 15th of October, 1852.



30th Sept. Mercury, Oct. 15th Venus. Saturn. Jupiter. Mars.
Scale, 40 seconds of arc to one Inch.

ASTRONOMICAL INTELLIGENCE.

(*Continued from page* 26.)

Jupiter is in the constellation Libra throughout the month. He sets on the 1st at 2h. 54m. A.M.; and on the last day at 0h. 55m. A.M., near the W.S.W. point of the horizon. He is moving very slowly westward among the stars; is near the Moon on the 27th; he souths at an altitude of about 23¼° on the 1st, increasing to about 23¾° on the last day.

Jupiter's Satellites.—Some eclipses of the 1st and 2nd, and one of the 3rd are visible.

Saturn is in the constellation Aries throughout the month. He is a morning star, and rises on the 1st at 2h. 44m. A.M., and on the last day at 0h. 57m. A.M., near the E.N.E. point of the horizon. He is near the Moon on the 14th.

Uranus is in the constellation Aries throughout the month. He rises on the 1st at 2h. 20m. A.M., and on the last day at 0h. 99m. A.M. near E N.E. He is near the Moon on the 13th; he is moving slowly eastward among the stars.

(*Continued from page* 30.)

Jupiter is in the constellation Libra throughout the month. He is an evening star, and sets on the 1st at 51m. after midnight; and on the last day at 10h. 57m. P.M., near the W.S.W. point of the horizon. He is almost stationary among the stars throughout the month. He is near the Moon on the 24th. He souths at an altitude of 23¾° on the 1st day, and 23½° on the last day. His path through the heavens is shown in the diagram in August.

Jupiter's Satellites.—A few of the eclipses of the satellites are visible.

Saturn is in the constellation Aries throughout the month. He rises on the 1st day at 0h. 53m. A.M., and on the last day, at 11h. 4m. P.M., near the E.N.E. points of the horizon. He moves slowly eastward among the stars, and is near the Moon on the 11th.

Uranus is in the constellation Aries throughout the month. He rises on the 1st at 0h. 25m. A.M., and on the last day, at 10h. 33m. P.M., near E.N.E. He is near the Moon on the 10th. He is moving very slowly eastward among the stars.

(*Continued from page* 46.)

Saturn is in the constellation Aries throughout the month. He is visible throughout the night, rising on the 1st at 4h. 51m. P.M., and before sunset after the 10th. He sets on the last day at 5h. 16m. A.M.; he rises near the E.N.E. points of the horizon. He is near the Moon on the 24th. He is stationary among the stars towards the end of the month.

Uranus is in the constellation Aries throughout the month. He rises on the 1st at 4h. 19m. P.M., souths at 11h. 31m. P.M., and sets at 43m. after 6h. on the following morning; on the last day he rises at 2h. 22m. P.M.; souths at 9h. 33m. P.M., at an altitude of 51⅓°; and sets the following morning at 44m. after 4h. He is near the Moon on the 24th. He is moving very slowly westward among the stars.

(*Continued from page* 50.)

badly situated for observation, being visible only some little time after sunset near the S.W. horizon. He sets on the 1st at 4h. 38m. P.M., and on the last day at 4h. 25m. P.M. He is moving eastward among the stars. His path in the heavens and relative position to the large stars near him are shown in the diagram in March.

Jupiter is in the constellation Sagittarius throughout the month. He is visible for some little time before sunrise. He rises on 1st at 7h. 18m. A.M., and on the last day at 6h. A.M. near the S.E. by E. point of the horizon.

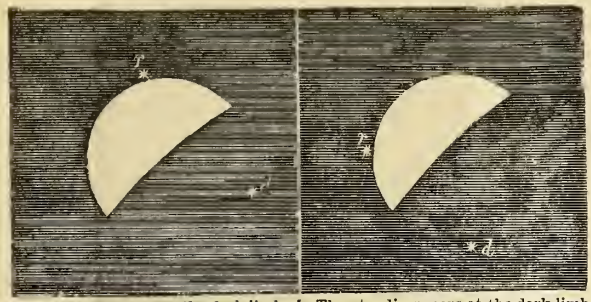
Jupiter's Satellites.—The Sattelites are invisible on account of the planet being too near the Sun till the 20th; an Eclipse is visible on the 30th.

Saturn is in the constellation Aries throughout the month; he is visible till early in the morning, and sets at 5h. 12m. on the 1st, and at 3h. 8m. on the last day. He moves slowly eastward among the stars; and is near the Moon on the 22nd.

Uranus is in the constellation Aries throughout the month. He souths on the 1st day at 9h. 29m. P.M., and sets the following morning at 40m. after, to near W.N.W; on the last day he souths at 7h. 28m. P.M., at an altitude of 50°, and sets the following morning at 42m. after 2h. He is near the Moon on the 21st; he is moving very slowly westward among the stars.

Occultations of Delta 1 Tauri and Delta 3 Tauri by the Moon, on February 27th, 1852, as seen through a telescope which inverts.

Delta 1 Tauri. Delta 3 Tauri.

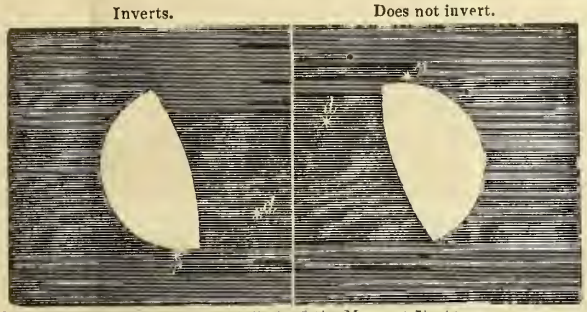


The star disappears at the dark limb of the Moon at 10h. 34m. P.M., and re-appears at the bright limb, at 11h. 27m. P.M.

The star disappears at the dark limb of the Moon at 11h. 57m. P.M., and re-appears at the bright limb at 0h. 41m. A.M.

Occultation of Nu Virginis by the Moon, May 27th, 1852, as seen through a telescope which

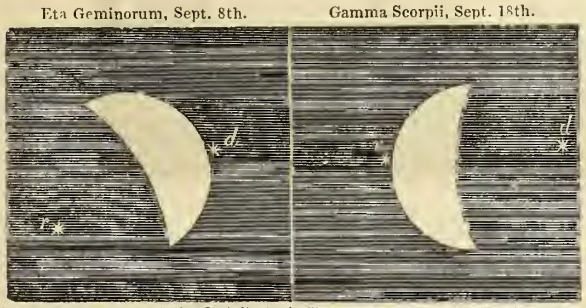
Inverts. Does not invert.



The star disappears at the dark limb of the Moon at 7h. 14m. P.M., and re-appears at the bright limb at 7h. 44m. P.M.

Occultations of Eta Geminorum and Nu Scorpii by the Moon, September 1852, as seen through a telescope which inverts.

Eta Geminorum, Sept. 8th. Gamma Scorpii, Sept. 18th.

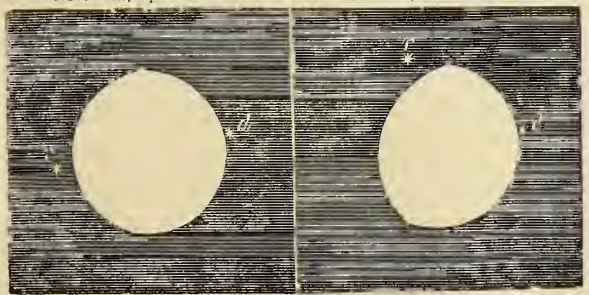


The star disappears at the dark limb of the Moon at 2h. 20m. A.M., and re-appears at the bright limb at 3h. 25m. A.M.

The star disappears at the dark limb of the Moon at 5h. 37m. P.M., and re-appears at the bright limb at 6h. 48m. P.M.

Occultations of the Stars Epsilon Tauri and Omicron Tauri by the Moon, on

Nov. 26th, Epsilon Tauri. Nov. 28th, Omicron Tauri.

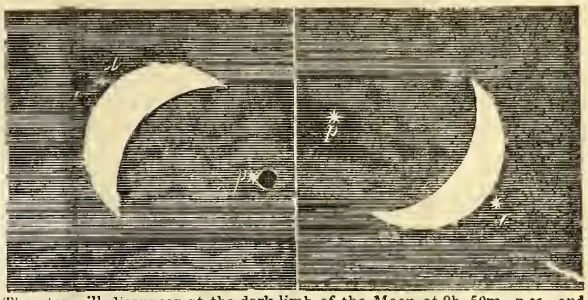


The star disappears at the dark limb of the Moon at 8h. 57m. P.M., and re-appears at the bright limb at 10h. 11m. P.M.

The star disappears at the dark limb of the Moon at 1h. 55m. A.M., and re-appears at the bright limb at 3h. 6m. P.M.

Occultation of Zeta Tauri by the Moon, April 23rd, 1852, as seen through a telescope which

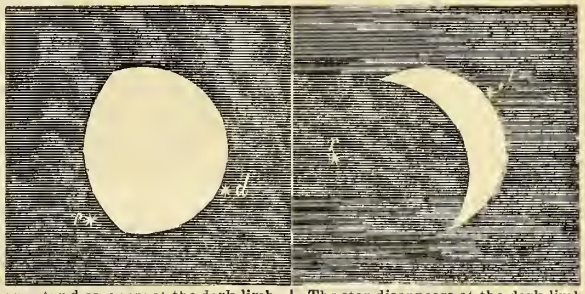
Inverts. Does not invert.



The star will disappear at the dark limb of the Moon at 9h. 50m. P.M., and re-appear at the bright limb at 10h. 43m. P.M.

Occultations of the Stars 33 Piscium and 3 Tauri by the Moon, on August, 1852.

35 Piscium, August 3rd. 3 Tauri, August 11th.

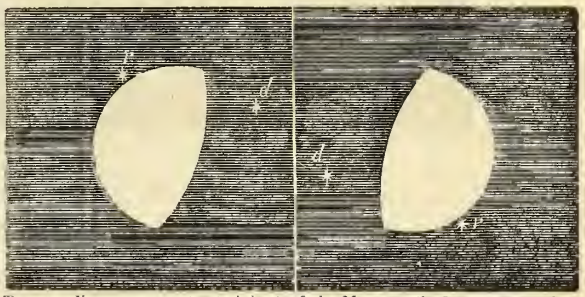


The star disappears at the dark limb of the Moon at 10h. 55m. P.M., and re-appears at the bright limb at 11h. 36m. P.M.

The star disappears at the dark limb of the Moon at 1h. 5m. A.M., and re-appears at the bright limb at 1h. 53m. A.M.

Occultation of Mu Capricorni on October 21st, 1852, as seen through a telescope which

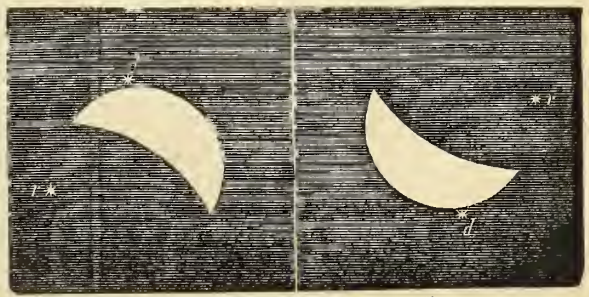
Inverts. Does not invert.



The star disappears at the dark limb of the Moon at 6h. 29m. P.M., and re-appears at the bright limb at 7h. 34m. P.M.

Occultation of Nu Virginis by the Moon, on December 5, 1852, as seen through a telescope which

Inverts. Does not invert.



The star disappears at the dark limb of the Moon at 3h. 20m. A.M., and re-appears at the bright limb at 4h. 29m. A.M.

SUMMARY OF THE PERSONS OF NOTE OR TITLE WHO HAVE DIED WITHIN THE YEAR.

*** Detailed biographical notices of all these persons are to be found in the ILLUSTRATED LONDON NEWS.

12th Jan.—ALFORD, Viscount, John Hume Egerton, eldest son and heir-apparent of the present Earl Brownlow; born 15th October, 1812.
4th Jan.—GORDON, Sir James Willoughby, Bart., G.C.B., G.C.H., a distinguished general in the British service, eldest son of Captain Francis Grant, R.N.; born in 1772.
12th Jan.—NEWCASTLE, fourth Duke of, Henry Pelham Fiennes Pelham Clinton, K.G.; born in 1785; distinguished in politics for unbending consistency, and for determined hostility to the progress of liberal opinions.
In Jan.—BLACKWOOD, Sir Henry Martin, Bart., a Captain and officer of distinction in the Royal Navy, son of Admiral Sir Henry Blackwood, Bart.; born 11th June, 1801.
8th Jan.—HAVILAND, John, M.D., Regius Professor of Medicine in the University of Cambridge; born in 1785.
20th Dec., 1849.—HOWISON, William, A.R.S.A., a well-known line engraver; born at Edinburgh in 1788, and died there.
In Jan.—HASTINGS, Paulyn Reginald Serlo Rawdon Hastings, third Marquis of; born 2nd June, 1832; succeeded 13th Jan., 1844.
14th Jan.—SOMERSET, The Rev. Lord William George Henry, Prebendary of Bristol, sixth son of the fifth Duke of Beaulort; born 2nd Sep., 1784.
11th Jan.—LORAINE, Sir Henry Claude, Bart.
20th Jan.—GROSVENOR, Field-Marshal Thomas, of Sewell Court, a distinguished officer in the British service; born in 1764.
29th Jan.—MAXWELL, W. Hamilton, the popular author of "Wild Sports of the West," and other works.
17th Jan.—NORTHAMPTON, Spencer Joshua Awlyne Compton, second Marquis of, the intelligent President of the Royal Society; born 2nd Jan., 1790.
23rd Jan.—DALMENY, Archibald, Lord, son of the fourth Earl of Roseberry; born 2nd Oct., 1809.
19th Jan.—TAYLOR, Captain Lord Robert, second son of the present Marquis of Headfort; born 7th Nov., 1826; died in consequence of a blow received.
In Jan.—BURGHERSH, Ernest, Lord, eldest son of the present Earl of Westmoreland; born 7th Jan., 1824.
30th Jan.—WARWICK, Sarah, Countess of, wife of the present Earl of Brooke and Warwick.
30th Jan.—LAWLEY, Sir Francis, Bart.
8th Feb.—BEXLEY, Nicholas Vansittart, Baron; born 29th April, 1766. He formerly held many ministerial appointments; his title is now extinct.
21st Jan., aged 53.—SHELLEY, Mrs., author of "Frankenstein," "The Last Man," &c.; daughter of William Godwin, and wife of Percy Bysshe Shelley, the poet.
27th Jan.—AUDUBON, John James, the great American naturalist, aged 76.
9th Feb.—CASTLEMAINE, Florinda, Dowager Viscountess, widow of the first Viscount; aged 88.
24th Jan., aged 63.—HAYNES, James, a dramatic writer of note, and one of the editors of the "Morning Herald;" author of the tragedies of "Conscience," and "Mary Stuart."
25th Feb.—BARLOW, Sir William Owen, Bart., a barrister and bencher of the Middle Temple, aged 76.
3rd March, aged 70.—HARRINGTON, Charles Stanhope, fourth Earl of, formerly well known in fashionable life, and as the friend of George IV.; married, 7th April, 1831, Miss Maria Foote.
In March.—BERNERS, The Rev. Henry Wilson, Lord; born 1st Oct., 1762.
4th March.—DE L'ISLE and DUDLEY, Philip Charles Sidney, first Baron; born 11th March, 1800; married Lady Sophia Fitzclarence.
In March, aged 70.—PIRIE, Sir John, Alderman, and in 1841 Lord Mayor of London.
7th March, aged 57.—HOOD, Sir Alexander, Bart., M.P.
3rd March, aged 56.—EAST, Sir East George Clayton, Bart.
9th March, aged 81.—SEFTON, Maria, Countess Dowager, widow of Philip, second Earl of Sefton.
15th March.—ALBEMARLE, Augustus Frederick Keppel, fifth Earl of; born 2nd June, 1794.
9th March.—WALLER, Sir Edmund, Bart.
In March.—NEWARK, Emily, Viscountess, widow of Charles, Viscount Newark, eldest son of the present Earl Manvers.
In March.—NOEL, The Hon. and Rev. Gerard Thomas, Canon of Winchester, brother of the present Earl of Gainsborough.
27th Feb., aged 88.—TOBIN, Sir John, Knt., an eminent Liverpool merchant.
In March, aged 79.—MEATH, John Chambre Brabazon, tenth Earl of.
21st March.—DACRE, Thomas Brand, twentieth Baron; born 1774.
17th March, aged 88.—NORTHCOTE, Sir Stafford Henry, Bart.
21st March.—DUFF, General the Hon. Sir Alexander, G.C.H., a distinguished military officer in the British service; second son of the third Earl of Fife.
In March.—HAMILTON, Admiral Sir Edward; born 12th March, 1772; second son of the late Captain Sir John Hamilton, Bart., R.N.
27th March.—HEATHCOTE, Sir Gilbert, Bart.; born in 1773.
3rd April.—LANSDOWNE, Louisa Emma, Marchioness of, fifth daughter of Henry Thomas, second Earl of Ilchester, and cousin to Charles James Fox; married, in 1808, to the present Marquis of Lansdowne.
1st April.—NICOLAS, Rear-Admiral John Toup, C.B., K.H., a distinguished officer in the British navy; brother of the late Sir Harris Nicolas, the able and gifted antiquary, historian, and writer; born 22nd Feb. 1788; entered the navy in 1797.
4th April.—RUSHTON, Edward, stipendiary magistrate at Liverpool, and barrister-at-law.
In April.—DILLON, Sir William, Bart., of Lismullen, county Meath.
In April.—TREVELYAN, Maria, Dowager Lady, widow of the late Sir John Trevelyan, Bart.
18th April.—LANGDALE, Henry Bickersteth, Lord; an eminent Chancery lawyer, and Master of the Rolls; born 18th June, 1783; appointed to the Rolls in 1836.
2nd April.—MACLEOD, Lieutenant-General Sir John, K.C.H.; entered the British service in 1793; made Lieutenant-General in 1837.
21st Feb.—HILL, Major-General Sir Dudley St. Leger, K.C.B.; born in 1790; made a Major-General in 1841; died in India.
20th April, aged 76.—HUNTER, Sir Claudius Stephen, Bart., Alderman, and formerly Lord Mayor of the City of London.
28th April.—CODRINGTON, Admiral Sir Edward, G.C.B.; a distinguished British naval officer, the hero of Navarino; born in 1770; made Admiral of the White in 1841.
In April.—RADNOR, Judith Anne, Countess of, wife of the present Earl Radnor, and third daughter of Sir H. P. St. John Mildmay, Bart.
29th April.—COTTENHAM, Earl of, and Lord Chancellor of England, Charles Christopher Pepys; a great equity lawyer; born in 1781; Master of the Rolls in 1834; Lord Chancellor in 1836 and in 1846.
2nd May.—BANTRY, Earl of, Richard White; born 6th August, 1767.
28rd April.—MONTFORT, Henry Bromley, third Baron; born in 1773; title extinct.
6th May.—NEWRY, Viscount Francis Jack Needham, eldest son of Francis Jack, present Earl of Kilmory; born 2nd February, 1815.
In May.—DOWTON, William, a celebrated comic actor; born in Exeter, 1764.
26th April.—WAYLETT, Mrs., a distinguished vocalist and actress; born in 1800; married twice. Her second husband was the late Mr. Alexander Lee, the composer, who died of grief for her.
7th May, aged 86.—AFFLECK, the Rev. Sir Robert, Bart., M.A., vicar of Finedon, Northamptonshire.
7th May, aged 66.—INGRAM, the Rev. Edward Winnington, Canon of Worcester Cathedral.
14th May.—STRATHALLAN, James Andrew John Lawrence Drummond, Viscount; born 24th March, 1767.
15th May.—LEUCHTENBERG, Augusta Amelia, Duchess Dowager of; late Vice-Queen of Italy, and widow of the famous Eugène Beauharnois, Napoleon's step-son; born the 1st June, 1788.
In May.—ARDEN, Margaret Elizabeth, Dowager Lady, widow of Charles George, Baron Arden, and mother of the present Earl of Egmont.
2nd June.—SHAFTESBURY, Cropley Ashley Cooper, sixth Earl of; born 27th December, 1768.
May 25th, at Florence.—SHIEL, the Right Hon. Richard Lalor, the celebrated Irish barrister, orator, and statesman; born 1794; appointed, in 1850, her Majesty's Minister Plenipotentiary in Tuscany.
7th June.—DALYELL, Sir John Graham, Bart., member of the Faculty of Advocates, President of the S. A. of Scotland.
6th June.—GARDINER, Lieutenant-General Sir John, K.C.B., Colonel of the 6th regiment of foot.
16th June, aged 80.—MELVILLE, Robert Dundas, second Viscount; Lord Privy Seal in Scotland.
11th May, aged 40.—MACGREGOR, Sir John Murray, Bart., President of the Virgin Islands.
14th June.—MALCOLM, Vice-Admiral Sir Charles, K.C.B., a distinguished naval officer, brother of Sir Pulteney, Sir John, and Sir James Malcolm.
10th June.—DUNDRENNAN, Thomas Maitland, Lord; a senator of the College of Justice; born 9th Oct., 1792.
14th June.—MOULE, Thomas, a clever antiquarian topographical and heraldic writer; author of the "Heraldry of Fish," and other works.
30th June.—DERBY, Edward Smith Stanley, thirteenth Earl of; President of the Linnæan and Zoological Societies; born 21st April, 1775.
7th July, aged 82.—TALBOT, the Hon. Sir John, Admiral of the Red, and a G.C.B.; brother of the late Lord Talbot de Malahide.
1st July.—DYCE SOMBRE, David Ochterlony, Esq., adopted son of the late Queen or Begum of Sirdhanah.
18th July.—BANNERMAN, Sir Charles, Bart.
18th July, aged 67.—SCOTT, Sir David, Bart., R.H.
2nd July, aged 62.—LASCELLES, the Right Hon. W. S. Sebright, third son of the second Earl of Harewood.
17th July, aged 81.—LINGARD, the Rev. John, D.D., the great historian; author of the "History of England," and of works relating to the Anglo-Saxons, and to the Catholic Church, of which he was a priest.
10th July, aged 61.—DAGUERRE, Louis Jaques Maude, discoverer of the photographic process, called after him the Daguerreotype.
21st July, aged 78.—SEBASTIANI, Horace de; a distinguished soldier, and a Marshal of France.
14th July.—CHARLEVILLE, Charles William Bury, second Earl of; born 29th April, 1801.
21st July.—BERESFORD, Louisa, Viscountess, fifth and youngest daughter of the first Lord Decies, Archbishop of Tuam, and wife, first, of the late Thomas Hope, of Deepdene, the author of "Anastasius;" and, secondly, of the present Viscount Beresford, the eminent General.
In July.—ROGERS, Francis James Newman, Esq., Q.C., and Recorder of Exeter; born in 1791; called to the bar in 1816.
4th Aug., aged 93.—STUART, Lady Louisa; youngest child of John, third Earl of Bute, minister of George III.
1st Aug., aged 95.—LEE, Harriet, one of the authors of "The Canterbury Tales."
18th Aug.—CLARE, John Fitzgibbon, second Earl of; born 10th June, 1792.
20th July, aged 81.—DICK, Sir Page Kebh, Bart.
11th Aug., aged 51.—JARDINE, Sir Henry, King's Remembrancer in Exchequer for Scotland; a clever antiquarian.
18th Aug.—HUNT, Thomas, the skilful curer of stammering.
8th Aug.—BROADLY, Henry, Esq., M.P. for the East Riding of Yorkshire.
In Aug.—HEATHCOTE, Admiral Sir Henry, Bart.; born in 1777.
26th Aug.—HAY, Rear-Admiral Lord John, K.C.H.; a very gallant and highly-distinguished naval officer in the British service; born 1st April, 1793; third son of George, seventh Marquis of Tweeddale.
16th Aug., aged 89.—PAULUS, Dr. H. S. G.; an able German theological writer.
1st Sept., aged 73.—PARKE, Sir William, Knt., an officer of distinction, and Lieutenant-Colonel in Her Majesty's 66th regiment.
30th Aug., aged 72.—JONES, Richard, a celebrated comedian.
29th Aug., aged 78.—KŒNIG, Charles, a well-known mineralogist, keeper of the mineral department of the British Museum.
27th Aug., aged 68.—DUKE FERDINAND GEORGE AUGUSTUS, of Saxe-Coburg-Gotha, uncle of the Queen and Prince Albert.
12th Sept.—DONOUGHMORE, the Right Hon. John Hely Hutchinson, third Earl of, K.P., P.C.; formerly known by the appellation of "Lavalette Hutchinson," on account of his aiding in the escape of M. de Lavalette from Paris.
6th Sept.—RIVERSTON, William Thomas Nugent, Lord; a title of the creation of James II. after he left England.
5th Sept.—HAYES, Sir Thomas Pelham, Bart.; born 18th Nov., 1794.
6th Sept., aged 43.—FLETCHER, Sir Henry, Bart.
1st Sept.—LOPEZ, Narciso; a general and soldier of former eminence in the Spanish service; executed at the Havannah for his recent piratical invasion of Cuba.
In Sept.—CALTHORPE, George Gough Calthorpe, third Baron Calthorpe; born 22nd June, 1787.
22nd Sept.—SHERWOOD, Mrs., an able and popular writer of juvenile and

serious fiction; author of "Henry and his Bearer;" born 6th May, 1775; daughter of Dr. George Butt, chaplain of George III.

17th Sept., aged 77.—CRABBE, the Rev. James, a singular, but able and benevolent divine, in Hampshire, whose influence among the gipsies and the poorer classes was very great.

In Sept.—DAVIS, Lieutenant-Colonel, a British officer of great accomplishments, and a very skilful artist; brother of Sir John Davis, Governor of Hong-Kong.

29th Sept.—PRINCE WILLIAM OF PRUSSIA, an eminent General in the service of this country; son of Frederick William II., King of Prussia; born the 3rd July, 1783.

Oct. 3.—LIVERPOOL, Charles Cecil Cope Jenkinson, third Earl of, G.C.B.; born 29th May, 1785.

4th Oct., aged 79.—STAFFORD, George William Jerningham, Baron.

In Oct.—LESLIE, Rear-Admiral, Samuel, a gallant naval officer in the British service; born in 1779.

1st Oct.—BOLINGBROKE, Henry St. John, fourth Viscount; born in March, 1787.

6th Oct.—REVENTLOW, Frederick Detlev, Count de, Danish Envoy and Minister Plenipotentiary at the Court of St. James.

4th Oct., aged 86.—GODOY, Don Manuel, the once famous Prince of the Peace, and minister and favourite of Charles IV., King of Spain, and of his consort, Maria Louisa.

In Oct.—TYLER, the Rev. James Endell, B.D., canon of St. Paul's, and rector of St. Giles'-in-the-Fields, London; author of a "Life of King Henry V."

In Oct., aged 66.—TYSON, William, an antiquarian and archæological writer

In Oct.—BAKER, George, the historian of Northamptonshire.

19th Oct.—ANGOULEME, Maria Theresa, Duchess of, Dauphiness; daughter of Louis XVI., and of his queen, Maria Antoinette; born 19th Dec., 1778.

23rd Oct., aged 92.—MORNINGTON, Katharine Elizabeth, Countess Dowager of; daughter of Admiral Forbes, and widow of Richard Earl of Mornington.

31st Oct.—HOPE, the Right Hon. Charles, Lord President of the Court of Session, an eminent Scottish advocate.

AN EXPLANATORY TABLE
OF THE
PUBLIC ACTS OF PARLIAMENT PASSED IN THE FOURTEENTH AND FIFTEENTH YEARS OF HER MAJESTY'S REIGN.
1851.

Cap. 1. An Act to Amend the Passengers Act, 1849.—This is a statute slightly amending and extending a very important Act passed in 1849, which regulates the carriage of passengers in merchant vessels.

Cap. 2. An Act authorising further Inclosures of Commons: pursuant to which are to be enclosed, Tamworth, Warwickshire; Bromsberrow Heath, Gloucestershire; Abergwilly, Carmarthenshire; Cellan Mountain, Cardiganshire; Kington, Herefordshire; Roggiet and Minutes Common, Monmouthshire; Blaenpenal, Cardiganshire; Colby Moor, Westmoreland; Meppershall, Herts and Beds; Twyford Down, Owlesbury, Hants; Lurkenthorpe Common, Salop; Ash, Surrey; Marshfield, Gloucestershire; Smallridge, Ipplepen, Devonshire; Towednack, Cornwall; Ludgershall, Wilts; Compton Abbas, Dorset; Droxford, Hants; Stourpaine and Ash, Dorset; Whitley, Shinfield Greens, Berks; Scalehy Moss, Cumberland; Newton, Cambridge.

Cap. 3. An Act to apply £8,000,000 out of the Consolidated Fund for the Public Service of 1851.

Cap. 4. An Act to Enable the Queen to appoint a Third Vice-Chancellor.

Caps. 5, 6. The usual Act for Regulating the Marine Forces while on Shore; and Act for Punishing Mutiny and Desertion, and for Payment of the Army.—These Acts are passed every year.

Cap. 7. An Act extending, in Ireland, to Steam Mills and Factories the Powers of Leasing, which certain Ecclesiastical Corporations and Persons have there already with regard to Water-Mills and Factories, under an Act of the Irish Parliament.

Cap. 8. "The Protection of Inventions Act, 1851."—This, and "The Designs Act, 1850," of the previous session, were obviously passed to give, on certain easy and cheap conditions, protection from piracy to the articles of utility and ornament, to the sculpture, and to the new inventions, exhibited in the Exhibition of 1851. Strange to say, these statutes have scarcely, if ever, been had recourse to, owing to the *nonchalance* of exhibitors on the subject; and, consequently, some of the finest foreign works, especially those of sculpture, in the Exhibition, have become vulgarized and depreciated by a general piracy of them. The ILLUSTRATED LONDON NEWS, previous to the Exhibition, urgently, but vainly, called attention to this valuable and important protection, by detailing and explaining it fully, both in English and in French.

Cap. 9. An Act for raising £17,756,600 by Exchequer Bills, for the Public Service of 1851.

Cap. 10. An Act to Indemnify Parties who have omitted to qualify themselves for Offices and Employments, and to give them further time (until the 5th March, 1852) to do so.

Cap. 11. An Act for the Better Protection of Apprentices and Servants. By this Act, a master or mistress, legally liable to provide necessary food, clothing or lodging to an apprentice or servant, and neglecting or refusing to do so, or assaulting such apprentice or servant to the peril of life or health, shall be guilty of a misdemeanor, and shall be liable to imprisonment for any term not exceeding three years, with or without hard labour. The costs of the prosecution are to be allowed by the Court. Parish guardians and overseers are to keep registers of all young persons, under sixteen, hired out as servants from workhouses. Young persons, under sixteen, hired, or apprentices from workhouses, are, while in service, to be visited, at least twice a year, by the relieving officer, or some other parish officer, who is to make a written report of their treatment. In certain cases of bodily injury committed on poor persons under sixteen, guardians and overseers are themselves authorized and required to conduct the prosecution, and their officer may be bound over by two justices to prosecute.

Cap. 12. An Act continuing the Property and Income-Tax from the 5th April, 1851, for One Year thence next ensuing, and until past assessments shall be collected and paid.—By this Act, after the 5th April, 1851, an abatement is allowed in assessments on tenant farmers, where their profits fall short of such assessments.

Cap 13. An Act to Regulate the Sale of Arsenic; by which, sellers of arsenic are required to enter in a book, previous to delivering any arsenic, the quantity of arsenic sold, the purpose for which it is required, the date of the sale, and the name, address, and condition of the purchaser. No person shall sell arsenic to a person unknown to him, unless in the presence of a known witness, who must sign his name and address to the above entry. No arsenic is to be sold to persons under full age. Arsenic, before its sale, must be mixed with soot or indigo, except under special circumstances, when a quantity not less than ten pounds may be sold without such mixture. Parties offending against this Act are liable to a penalty not exceeding twenty pounds, on summary conviction before two justices. The Act is not to prevent the sale of arsenic in medicine made up according to the prescription of a legally qualified medical practitioner, or member of the medical profession, or the sale of arsenic by wholesale to retail dealers upon written orders in the ordinary course of wholesale dealing.

Cap. 14. An Act to Amend the Parliamentary Registration of Compound Householders, and to Facilitate their Right to Vote in the Election of Borough Members.—By this Act, persons having once claimed to be rated in respect of premises, and paying or tendering on or before the 20th July the rates due on the 5th January preceding, are not required to renew their claim. The liability of the claimant to rates is to continue so long as he occupies the premises, and remains on the register. Composition with the landlord is to determine the amount of rate to which a tenant is liable.

Cap. 15. An Act which does away with the necessity of the signature of the Irish Master of the Rolls to the regulations and orders under the Court of Chancery (Ireland) Regulation Act, 1850.

Cap. 16. An Act for the Better Management and Control of the Highways in South Wales.

Cap. 17. An Act to Explain and Amend an Act for the Regulation of Process and Practice in the Superior Common-Law Courts in Ireland.

Cap. 18. An Act to continue the Stamp Duties (Ireland) granted by the 5th and 6th Vict., and to make Regulations for Collecting and Managing them.

Cap. 19. An Act for the Better Prevention of Offences.—By this Act, persons, by night, found armed, with intent to break into and commit felony in any house, or having implements of burglary, or having their faces blackened, or being in any house with intent to commit felony, shall be guilty of a misdemeanor, and shall be liable to imprisonment, with or without hard labour, for any term not exceeding three years; and on a second conviction, or on a conviction after having been previously convicted of felony, shall be liable to transportation for a term not less than seven, nor more than ten years, or to imprisonment as above. Persons using chloroform or stupifying drugs in order to commit felony, shall be guilty of felony. Persons who inflict any grievous bodily harm, with or without a weapon, or cut or wound, shall be guilty of a misdemeanor, punishable by imprisonment, with or without hard labour, not exceeding three years. A person may be convicted of this misdemeanor on an indictment for felony other than murder or manslaughter. Persons throwing anything on a railway, displacing anything connected with it, turning machinery, showing signals, or doing any other thing to endanger the safety of passengers, or setting fire to a railway station or building, or goods in it, shall be guilty of felony. The using of chloroform, and these railway offences, are punishable by transportation for life, or not less than seven years; or imprisonment, with or without hard labour, not exceeding three years. In cases of setting fire to goods in a station, the transportation is not to exceed ten years. The Act then provides for the apprehension and prosecution of offending parties.

Cap. 20. An Act to Extend the Remedies of the 12 and 13 Vict. c. 105, ss. 20, 21, to the Recovery of all Fee Farm Rents and to other Rents in Ireland, reserved upon Grants of Lands in which the Grantors have no Reversion.

Cap. 21. An Act to Amend certain Acts for empowering Grand Juries in Ireland to present Bridges and Tolls.

Cap. 22. An Act to Continue till the 31st December, 1856, the Survey of Great Britain, Berwick-upon-Tweed, and the Isle of Man.

Cap. 23. An Act to Authorize for a Further Period the Advance of Money out of the Consolidated Fund, to a Limited Amount, for carrying on Public Works and Fisheries, and Employment of the Poor.

Cap. 24. An Act to Amend the Acts for the Granting of Sites for Schools.

Cap. 25. An Act to Improve the Law of Landlord and Tenant in relation to Emblements, to Growing Crops seized in Execution, and to Agricultural Tenants' Fixtures.—This Act provides, *first*, that on determination of a lease for life, or other uncertain interest, instead of claims to emblements or profits of the crop, the tenant shall hold on and be liable to the new landlord until the expiration of the current year of his lease; *secondly*, that growing crops seized and sold under execution, shall while remaining on the land be liable to and subject to distress for the rent accruing due after the service and sale; *thirdly*, that the tenant may remove buildings and fixtures by him, with the landlord's permission, erected, unless the landlord elect to take them at a valuation, ascertained by referees; and *fourthly*, that on a tenant quitting, and leaving tithe rent-charge unpaid, the landlord, or in-coming tenant, may pay the same, and recover it from the first-named tenant as a simple contract debt. The Act does not extend to Scotland.

Cap. 26. An Act to Amend the Acts relating to the British White Herring Fishery.

Cap. 27. An Act to Amend certain Acts for the Improvement of Prisons and Prison Discipline in Scotland.

Cap. 28. An Act for the Well-ordering of Common Lodging-houses.—This Act, referring to the poorer classes, provides for the registering of common lodging-houses; for local authorities making and enforcing regulations respecting them; and for the keepers of them giving notice of fever or contagious disease in them to the local authority and to the poor-law medical officer: it provides also for the inspection and cleansing of common lodging-houses, and enacts summary penalties for disobeying the statute.

Cap. 29. An Act for Further Continuing certain Temporary Provisions concerning Ecclesiastical Jurisdiction in England until the 1st August, 1852, and to the end of the then next session of Parliament.

Cap. 30. An Act to Continue the 4th and 5th Vict. c. 59, an Act for Authorizing the Application of Highway Rates to Turnpike Roads, until the 1st Oct., 1852, and to the end of the then next session of Parliament.

Cap. 31. An Act to Continue the 3rd and 4th Vict. c. 110, an Act to Amend the Laws relating to Loan Societies, until the 1st Oct., 1852, and to the end of the then next session of Parliament.

Cap. 32. An Act to Suspend until the 1st Oct., 1852, the making of Lists and the Ballots and Enrolments for the Militia of the United Kingdom.

Cap. 33. An Act to Enlarge until the 1st Oct., 1851, the time of giving Notice of Compounding for Assessed Taxes, the Contracts for such Compositions to be executed on or before the 1st Dec., 1851.

Cap. 34. An Act to Encourage the Establishment of Lodging-houses for the Labouring Classes.—This Act may be adopted in any municipal borough under the Corporation Act; in any district having a board of health under the Public Health Act; in any district having a Paving or Improving Act; and, with the approval of a Secretary of State, in any parish having a population of 10,000; and in certain other parishes. The statute provides for carrying the Act into execution; for erecting lodging-houses, for raising and defraying the expenses, and for making bye-laws and rules for the regulation of them.

Cap. 35. An Act to Extend the Benefit of Certain Provisions of the General Merchant Seamen's Act relating to Apprentices bound to the Sea Service, by Boards of Guardians of the Poor in Ireland, and to enable such Guardians to place out Boys in the Naval Service.

Cap. 36. An Act to Repeal the Duties payable on Dwelling-houses, according to the Number of Windows or Lights, and to grant in lieu thereof other Duties on Inhabited Houses, according to their Annual Value.—By this Act the window-tax is abolished from the 5th of April, 1851, in England, and from Whit Sunday, 1851, in Scotland: instead of which, a duty of six-

pence in the pound is put upon all inhabited dwelling-houses worth the rent of £20 a year, which are occupied for trade or merchandize, or as licensed public-houses, or as farm-houses; and a duty of nine-pence in the pound is put upon all other inhabited dwelling-houses worth the rent of £20 a year. Market-gardens and nursery-grounds are not to be included in the valuation of dwelling-houses.—Persons are liable to the same duty for armorial bearings under this Act, as if chargeable under the window-tax Act.

Cap. 37. An Act to Continue certain Turnpike Acts in Great Britain.

Cap. 38. An Act to Facilitate Arrangements for the Relief of Turnpike Trusts, and to make certain Provisions respecting Exemptions from Tolls.

Cap. 39. An Act to Exempt Burgesses and Freemen, in certain cases, from the Operation of an Act for the Better Assessing and Collecting the Poor Rates and Highway Rates in respect of Small Tenements.

Cap. 40. An Act for Marriages in India.—This statute establishes, as in England, a system of marriage by registration, in India, between Christians, or when one of the parties is a Christian. This act is not, however, compulsory on parties marrying, but the marriage may be solemnized as heretofore, by persons in holy orders, or under the 58th George, cap. 3, s. 4, or under other laws in force in India.

Cap. 41. An Act to Regulate the Salaries of the Chief Justice of the Court of Queen's Bench, and the Chief Justice of the Court of Common Pleas.—For the future, by this Act, the former judge is to have £8000 a year, and the latter £7000 a year.

Cap. 42. An Act to make Better Provision for the Management of the Woods, Forests, and Land Revenues of the Crown, and for the Direction of Public Works and Buildings.—This Act separates the management of the possessions and land revenues of the crown from the other duties of the Commissioners of Woods and Forests, and establishes, *first*, a commission of her Majesty's Woods, Forests, and Land Revenues, to be superseded, if thought fit, by a Surveyor-General, with a salary of £1500 a year; and, *secondly*, a commission of her Majesty's Works and Buildings, with a First Commissioner, to have a salary of £2000 a year, and to be capable of sitting in Parliament.

Cap. 43. An Act for Disafforesting the Forest of Hainault in Essex.

Cap. 44. An Act to Continue Certain Acts for Regulating Turnpike Roads in Ireland.

Cap. 45. An Act to Continue the 5th and 6th Vict., c. 123, for Amending the Law of Private Lunatic Asylums in Ireland, until the 31st July, 1855, and to the end of the then next session of Parliament.

Cap. 46. An Act to Amend the 4th and 5th Vict., c. 27, and the 5th Vict., sess. 2, c. 20, enabling the Commissioners of Woods to purchase lands for Victoria Park, and to indemnify trustees of copyhold lands held in trust for her Majesty.

Cap. 47. An Act to Continue till the 1st Oct., 1852, and to the end of the then next session of Parliament, the exemption of inhabitants from liability to be rated as such in respect of stock in trade, or other property, to the relief of the poor.

Cap. 48. An Act to Continue for Five Years, from the 1st August, 1851, and to the end of the then next session of Parliament, the 50th Geo. 3, c. 102, as amended by the 4th Geo. 4, c. 87, for the Prevention of Unlawful Oaths in Ireland.

Cap. 49. An Act to Repeal the 11th and 12th Vict., c. 129, for making Preliminary Inquiries in certain cases of applications for Local Acts, and to make other provisions in lieu thereof.

Cap. 50. An Act to Amend the 11th and 12th Vict., c. 63, the Public Health Act, and the 3rd and 4th Will. 4, c. 90, in respect of the Assessment of Tithe and Tithe Rent Charges for Certain Rates.

Cap. 51. An Act to Authorize for a further period (during the term of five years next after the 4th April, 1852) the Application of Money for the Purposes of Loans for carrying on Public Works in Ireland.

Cap. 52. An Act to Facilitate the more speedy Arrest of Absconding Debtors.—This statute gives to the country commissioners of the Court of Bankruptcy, and to the judges of the County Courts, except those of Middlesex and Surrey, a power similar to that given by the 1st and 2nd Vict., c. 110, s. 3, to the judges of the superior courts; *i. e.*, the power of granting a warrant to arrest, upon affidavit of a debt of twenty pounds or more being owing, and of the debtor being about to quit England.

Cap. 53. An Act to Consolidate and Continue the Copyhold and Inclosure Commissions, and to Provide for the Completion of Proceedings under the Tithe Commutation Acts.

Cap. 54. An Act authorizing a further Inclosure of Commons: pursuant to which are to be enclosed, Hadleigh Common, Essex; Hainworth and Lees, Yorkshire; East Anstey, Devonsbire; Pitfold Manor, Surrey; Letton Common and the Fleete, Herefordshire; Skedbrooke-cum-Saltfleet, South Somercotes, Lincolnshire; Rudgwick, Sussex; Bentley, Hampshire; Westhall, Suffolk; Aylesford, Kent; Edgware, Middlesex.

Cap. 55. An Act to Amend the Law relating to the Expenses of Prosecutions, and to make further Provision for the Apprehension and Trial of Offenders in certain Cases.—The principal features of this statute are,—1. The extension of the allowance of costs in prosecutions, for misdemeanors, to the offences of abduction and other criminal treatment of young girls, of conspiring to make a charge of felony, and of conspiring to commit a felony; and in common assaults when parties are bound over to prosecute.—2. The payment of clerks of the peace by salaries instead of fees.—3. The removal of the statutable restraint which prevented the Quarter Sessions of London, Middlesex, Essex, Kent, and Surrey, from trying certain offences which might be tried at other Quarter Sessions.—4. The power of appointing a Deputy Judge of the Middlesex Sessions, and of dividing those Sessions.—5. Directions as to backing warrants in the Channel Islands, and as to the committal, trial, and imprisonment of certain offenders.

Cap. 56. An Act to Sanction the Service, by Post, of Notices relative to the Proceedings of certain Charitable Institutions, and to make further Provision as to the Service of such Notices in future.

Cap. 57. An Act to Consolidate and Amend the Laws relating to Civil Bills, and the Courts of Quarter Sessions in Ireland, and to Transfer to the Assistant-Barristers certain Jurisdiction as to Insolvent Debtors.—This statute consolidates the law relating to the recovery of small debts, and of tenements by civil bill in Ireland, and transfers, after 1852, the jurisdiction of the commissioners of the Insolvent Court on circuit to the Assistant-Barristers of Quarter Sessions in that kingdom.

Cap. 58. An Act to Defray the Expenses of the Disembodied Militia in Great Britain and Ireland, to grant Allowances in certain Cases to Subaltern Militia Officers, and to Authorize the Employment of Non-Commissioned Officers.

Cap. 59. An Act to Continue certain of the Allowances of the Excise Duty on Soap used in Manufactures, until the end of the session of Parliament next after the 31st July, 1853.

Cap. 60. An Act to Prevent the Assumption of certain Ecclesiastical Titles in respect of Places in the United Kingdom.—After a long preamble referring to the ecclesiastical titles assumed under certain briefs, rescripts, or letters apostolical from the See of Rome, and particularly under a certain brief, rescript, or letters apostolical, purporting to have been given at Rome on the 29th September, 1850, and referring also to the enactment (the Emancipation Act, the 10 Geo. 4, c. 7. s. 24) on the subject of the assumption of ecclesiastical titles, and to the doubts existing on the point, and to the expediency of prohibiting the assumption of such titles, the statute enacts thus, in Sect. 1:—"All such briefs, rescripts, or letters apostolical, and all and every the jurisdiction, authority, pre-eminence, or title conferred or pretended to be conferred thereby, are and shall be and be deemed unlawful, and void." Section 2 enacts, "that if, after the passing of this Act (the 1st August, 1851) any person shall obtain or cause to be procured from the Bishop or See of Rome, or shall publish or put in use within any part of the United Kingdom, any such bull, brief, rescript, or letters apostolical, or any other instrument or writing, for the purpose of constituting such Archbishops or Bishops of such pretended provinces, sees, or dioceses within the United Kingdom, or if any person other than a person thereunto authorized by law, in respect of an Archbishopric, Bishopric, or Deanery of the United Church of England and Ireland, assume or use the name, style, or title of Archbishop, Bishop, or Dean of any city, town, or place, or of any territory or district (under any designation or description whatsoever) in the United Kingdom, whether such city, town, or place, or such territory or district, be or be not the see or the province, or co-extensive with the province, of any Archbishop, or the see, or diocese, or co-extensive with the diocese, of any Bishop, or the seat or place of the church of any Dean, or co-extensive with any deanery of the said United Church, the person so offending shall for every such offence forfeit and pay the sum of one hundred pounds, to be recovered as penalties imposed by the recited Act (the 10 Geo. 4, c. 7) may be recovered under the provisions thereof, (*i. e.*, as a debt due to the Crown, by information in the name of the Attorney-General for England or for Ireland, or the English or Irish Court of Exchequer, or in the name of the Advocate-General in the Court of Exchequer in Scotland) or by action of debt at the suit of any person in one of her Majesty's superior courts of law, with the consent of her Majesty's Attorney-General in England or Ireland, or her Majesty's Advocate in Scotland." By Sect. 3, the Act is not to extend to Bishops of the Protestant Episcopal Church in Scotland. By Sect. 4 (the last section), the statute is not to affect the 7 and 8 Vict. c. 97, an Act for the more Effectual Application of Charitable Donations and Bequests in Ireland.

Cap. 61. An Act for providing a Metropolitan Market, and Conveniences connected therewith, in lieu of the Cattle Market at Smithfield.—The Crown, after six months from the passing of this Act (the 1st August, 1851), if the Corporation of London will not in the meantime undertake to execute the Act, may appoint five Commissioners to provide for the establishment and regulation of a cattle and meat market in a convenient situation, instead of Smithfield Market. On these Commissioners reporting to a Secretary of State that the new market is ready, the Secretary of State is to notify in the *Gazette* that Smithfield is to cease to be a market, and it will so cease accordingly. The Corporation of London may, by notice within six months after the passing of this Act, undertake to execute the Act, and then no Commissioner shall be appointed. If the Corporation do not notify within the six months that they will undertake to execute the Act, then, unless the new market be opened within three years after such six months, this Act is to be void.

Cap. 62. An Act to Alter Certain Duties of Customs (relative to Coffee and Timber), and to enable the Treasury to Regulate the Mode of Keeping the Account between the Receiver-General of the Customs and the Bank of England.—By this Act, the duty on coffee is three-pence the pound, and when it is kiln-dried, roasted, or ground, sixpence the pound.

Cap. 63. An Act for the Settlement of the Boundaries between the Provinces of Canada and New Brunswick.

Cap. 64. An Act to Repeal the 9 and 10 Vict., c. 105, the Act for Constituting Commissioners of Railways.—The powers, rights, and duties of the Commissioners of Railways are, after the 10th Oct., 1851, to be transferred to the Board of Trade.

Cap. 65. An Act to Continue certain Temporary Provisions relating to the Collection of Grand Jury Cess in Ireland, and also to provide for the Due Annexation of an Isolated District, formerly of the County of Dublin, to a Barony of the County of Wicklow, for the Purposes of Grand Jury Cess and other purposes.

Cap. 66. An Act for Rebuilding the Bridge over the River Ness, at the Town of Inverness, and Improving the Approaches; and for Amending the Acts relating to Highland Roads and Bridges.

Cap. 67. An Act to Repeal so much of the 12 Geo. 3, cap. 61, relating to the Making, Keeping, and Carriage of Gunpowder, as exempts therefrom certain Gunpowder Magazines and Stores near Liverpool, and to make certain Temporary Provision with regard to the said Magazines and Stores.

Cap. 68. An Act to Provide for the Better Distribution, Support, and Management of Medical Charities in Ireland, and to Amend the 10th and 11th Vict., c. 90, an Act to Provide for the Execution of the Laws for the Relief of the Poor in Ireland.

Cap. 69. An Act to Continue until the 1st Sept., 1852, the 11 and 12 Vict., c. 107, an Act to Prevent the Spreading of Contagious or Infectious Disorders among Sheep, Cattle, and other Animals.

Cap. 70. An Act to Alter and Amend certain Provisions of the Lands Clauses Consolidation Act, 1845, so far as relates to Ireland.

Cap. 71. An Act to Repeal certain Statutes relating to the Irish Branch of the United Church of England and Ireland.

Cap. 72. An Act to Consolidate and Amend the Laws relating to the Erection and Endowment of Churches and Chapels and Perpetual Curacies in Ireland.

Cap. 73. An Act to Consolidate and Amend the Laws relating to Ecclesiastical Residences in Ireland.

Cap. 74. An Act to Amend the 11 and 12 Vict., c. 80, s. 2, an Act relating to Poor-rate Poundage and the Valuation of Ecclesiastical Property in Ireland; and to Provide for the Renewal of Leases of Lands disappropriated from Bishoprics.

Cap. 75. An Act to Amend and Continue (for one year from the 7th Aug., 1851) the Metropolitan Sewers Acts, the 11 and 12 Vict., c. 112, and the 12 and 13 Vict., c. 93.

Cap. 76. An Act to Extinguish the Right of the Crown to Deer in the New Forest, and to give Compensation in lieu thereof; and for other purposes relating to the said Forests.

Cap. 77. An Act to Alter and Extend the Powers of the 9 & 10 Vict., c. 38, an Act to Empower the Commissioners of Woods to form a Royal Park in Battersea Fields, in Surrey.

Cap. 78. An Act to Continue to the 1st Jan., 1856, and to the end of the then next session of Parliament, and to Amend the 6 & 7 Vict., c. 101, an Act Establishing an Office for the Benefit of the Coalwhippers of the Port of London.

Cap. 79. An Act to Consolidate and Amend the Laws relating to the Regulation of Steam Navigation, and to the Boats and Lights to be carried by Sea-going Vessels.—By this statute, which comes into operation on the 31st December, 1851, passenger steam-vessels are to be surveyed at least twice a year, by a shipwright surveyor and an engineer surveyor officially appointed for the purpose; upon which being done, the Board of Trade is to grant to the owner a certificate, without which no vessel

can proceed on her voyage. The Act contains, also, regulations as to the number of passengers to be carried, and as to payment of their fares; as to the conduct of official surveyors; as to the divisions in iron steamers, and as to all steam-vessels having safety-valves; as to vessels having boats, and how they are to pass each other. The Board of Trade may send inspectors on board vessels whenever necessary. The statute enacts various penalties, and the modo of recovering them.

Cap. 80. An Act for Confirming a certain Provisional Order of the General Board of Health, for applying the Public Health Act, 1848, to the Borough of Great Yarmouth, in the County of Norfolk.

Cap. 81. An Act to Authorize the Removal from India of Insane Persons charged with Offences, and to give Better Effect to Inquisitions of Lunacy taken in India.

Cap. 82. An Act to Simplify the Forms of Appointments to certain Offices, and the Mannor of Passing Grants under the Great Seal.—By this Act, warrants signet and privy-seal bills are dispensed with, for the future, in passing grants and letters-patent under the Great Seal.

Cap. 83. An Act to Improve the Administration of Justice in the Court of Chancery, and in the Judicial Committee of the Privy Council.—By this statute, the Crown has power to appoint two barristers, each of fifteen years' standing, to be judges of the Court of Appeal in Chancery, with the same jurisdiction as the Lord Chancellor has in the Court of Chancery. The jurisdiction of the Vice-Chancellor in Bankruptcy is to be transferred to this Court of Appeal. From the 11th Oct., 1851, the salary of the Lord Chancellor is to be £10,000 a year; that of the Master of the Rolls is to be £6000 a year; and the judges of the Court of Appeal, when appointed, are to have each £6000 a year.

Cap. 84. An Act to Alter and Amend the 13 & 14 Vict. c. 70, an Act Empowering the Canterbury Association to Dispose of certain Lands in New Zealand.

Cap. 85. An Act further to Amend the 6 Will. 4, c. 13, an Act to Consolidate and Amend the Laws relating to the Constabulary Force in Ireland.

Cap. 86. An Act to Regulate the Affairs of certain Settlements established by the New Zealand Company in New Zealand.

Cap. 87. An Act to Regulate certain Proceedings in Relation to the Elections of Representative Peers for Scotland.—By this Act, the titles of peerages in which no vote has been given for fifty years, are not to be called at elections of Scotch representative peers, if the House of Lords shall so direct.

Cap. 88. An Act for Amending the several Acts for the Regulation of Attorneys and Solicitors.—This statute extends to Bachelors of Arts and of Laws in the Queen's University in Ireland, certain statutable provisions and privileges relating to the admission of attorneys enacted in favour of graduates of the Universities of Oxford, Cambridge, and Trinity College, Dublin.

Cap. 89. An Act to Amend the Metropolitan Interment Act, 1850, and to authorize the Advance of Public Money, to a limited Amount, for the purposes of the said Act.

Cap. 90. An Act for the better Collection of Fines, Penalties, Issues, Amerciaments, and Forfeited Recognizances in Ireland.

Cap. 91. An Act to Authorize the Application of Advances (out of Money now authorized to be Advanced for the Improvement of Landed Property) to Facilitate Emigration from certain Distressed Districts of Scotland.

Cap. 92. An Act to Consolidate and Amend the Acts relating to certain Offences and other Matters, as to which Justices of the Peace exercise Summary Jurisdiction in Ireland.

Cap. 93. An Act to Consolidate and Amend the Acts regulating the Proceedings at Petty Sessions, and the Duties of Justices of the Peace out of Quarter Sessions, in Ireland.

Cap. 94. An Act to Define and Amend the Mineral Customs of certain Parts of the Hundred of High Peak, in the County of Derby, part of the Possessions of Her Majesty's Duchy of Lancaster; to make Provision for the Better Administration of Justice in the Barmote Courts therein; and to Improve the Practice and Proceedings of the said Courts.

Cap. 95. An Act for Transferring the Duties of Paving, Lighting, Watering, and Cleansing Parts of the Crown Estate in the District of the Regent's Park, and certain Streets and Places in Westminster, from the Commissioners acting under several Acts of George 4 and William 4, to the Parishes; and for Transferring the Jurisdiction of the said Commissioners over certain other Places in Westminster, to the Commissioners of her Majesty's Works and Public Buildings; and for other purposes.

Cap. 96. An Act to Amend the Mercantile Marine Act, 1850.

Cap. 97. An Act to Amend the Church Buildings Acts.

Cap. 98. An Act for Confirming certain Provisional Orders of the General Board of Health.

Cap. 99. An Act to Amend the Law of Evidence.—By this statute, parties to actions and suits are admissible as witnesses on either side, except in proceedings for adultery, or in actions of breach of promise of marriage. The statute also gives power to common-law courts to compel inspection of documents in the custody of the opposite party; and it facilitates the admission in evidence of various written proofs.

Cap. 100. An Act for further Improving the Administration of Criminal Justice.—This statute, by giving courts power to correct variances in indictments, and by simplifying the statement of many matters in them, renders prosecutions under the criminal law more concise and easy. The Act gives, also, facility for proceeding and convicting in cases of perjury; and it adds the punishment of hard labour to the commission of the following misdemeanors; viz. cheats and frauds; conspiracies to cheat, to extort money or goods, to falsely accuse of any crime, or to obstruct public justice; escapes or rescues from custody on a criminal charge; indecent exposure or assault; assault occasioning bodily harm; outrage on girls under twelve years of age; and selling obscene publications.

Cap. 101. An Act to apply a Sum out of the Consolidated Fund, and certain other Sums, to the Service of 1851, and to Appropriate the Supplies granted in this session of Parliament.

Cap. 102. An Act to Amend the Acts relating to the Merchant Seamen's Fund, and to provide for the Winding-up of the said Fund, and for the Better Management thereof in the Meantimo.

Cap. 103. An Act to Confirm certain Provisional Orders of the General Board of Health.

Cap. 104. An Act to Facilitate the Management and Improvement of Episcopal and Capitular Estates in England.

Cap. 105. An Act to Continue an Act of the Fourteenth Year of Her Majesty, for Charging the Maintenance of certain Poor Persons in Unions in England and Wales upon the Common Fund, and to make certain Amendments in the Laws for the Relief of the Poor.

Cap 106. An Act for Appointing Commissioners to Inquire into the Existence of Bribery in the Borough of St. Albans.

Among the hundred and forty-six local and personal Acts passed in the last session of Parliament, there are sixty-one relative to railways. Among the private Acts, there are three for divorces; viz. to dissolve the marriages, 1, of Edmund Heathcote, Esq., with Elizabeth Lucy Heathcote; 2, Henry Boddington Webster, Esq., with Emilie Marie Louise Wilhelmina Webster; and, 3, William Houlbrooke Tayleur, Esq., with Emma Elizabeth Tayleur.

THE QUEEN AND ROYAL FAMILY.

THE QUEEN.—Victoria, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, was born May 24th, 1819; succeeded to the throne June 20th, 1837, on the death of her uncle, King William IV.; crowned June 28th, 1838, and married, February 10th, 1840, to his Royal Highness Prince Albert. Her Majesty is the only daughter of his late Royal Highness Edward Duke of Kent, son of King George III.

His Royal Highness Francis-Albert-Augustus-Charles-Emanuel Busici, Duke of Saxe, Prince of Coburg and Gotha, K.G., Consort of her Majesty, born August 26th, 1819.

Her Royal Highness Victoria-Adelaide-Mary-Loulsa, Princess Royal, born November 21st, 1840.

His Royal Highness Albert-Edward, Prince of Wales, born November 9th, 1841.

Her Royal Highness Alice Maud, born April 25th, 1843.

His Royal Highness Alfred-Ernest-Albert, born August 6th, 1844.

Her Royal Highness Princess Helena-Augusta Victoria, born May 25th, 1846.

Her Royal Highness Princess Louisa-Carolina-Alberta, born March 18th, 1848.

His Royal Highness Arthur-William-Patrick-Albert, born May 1st, 1850.

Ernest-Augustus, Duke of Cumberland, in Great Britain, and King of Hanover, uncle to her Majesty, born June 5th, 1771; married, August 29th, 1815. Issue, George-Frederick.

George Frederick-William-Charles, K.G., Duke of Cambridge, cousin to her Majesty, born March 26th, 1819.

Mary, aunt to her Majesty, born April 25th, 1776; married, July 22nd, 1816, her cousin, the Duke of Gloucester, deceased.

Victoria-Mary-Louisa, Duchess of Kent, born August 17th, 1786; married, in 1818, the Duke of Kent (who died January 23rd, 1820); her Majesty's mother.

Augusta-Wilhelmina-Louisa, Dowager Duchess of Cambridge, niece of the Landgrave of Hesse, born July 25th, 1795; married, in 1818, the late Duke of Camhridge, by whom she has issue, George-William, Augusta-Caroline, and Mary-Adelaide.

George-Frederick-Alexander-Charles-Ernest-Augustus, K.G., only child of the King of Hanover, Prince Royal of Hanover, cousin to her Majesty; born May 27th, 1819; married, February, 1843, Princess Mary of Saxe-Altenberg, and has a son.

Augusta-Caroline-Charlotte-Elizabeth-Mary-Sophia-Louisa, daughter of the late Duke of Cambridge, and cousin to her Majesty, born July 19th, 1822; married, June 28th, 1843, Frederick, Hereditary Grand Duke of Mecklenburg-Strelitz.

Mary-Adelaide-Wilhelmina-Elizaheth, daughter of the late Duke of Cambridge, and cousin to her Majesty, born, November 27th, 1833.

THE QUEEN'S HOUSEHOLD.

Lord Great Chamberlain	Lord Willoughby d'Eresby
Lord Steward	Marquis of Westminster
Lord Chamberlain	Marquis of Breadalbane, K.T.
Vice-Chamberlain	Lord F. Fitzalan Howard
Master of the Horse	Duke of Norfolk
Clerk Marshal and Chief Equerry	Lord Alfred Paget
Treasurer of the Household	Lord Marcus Hill
Comptroller of the Household	Earl of Mulgrave
Lord High Almoner	Bishop of Oxford
Sub-Almoner	Rev. G. Goodenough, D.D.
Clerk of the Closet	Bishop of Chester
Master of the Buckhounds	Earl of Bessborough
Comptroller of Accounts	Sir William Martins
Master of the Household	Major T. M. Biddulph
Captain of the Yeomen of the Guard.	Marquis of Donegal
Captain of Gentlemen-at-Arms	Lord Foley
Lords in Waiting	Earl of Listowel, Lord Camoys, Lord Waterpark, Lord Elphinstone, Earl of Morley, Lord Byron, Lord Ducie, Marquis of Ormonde
Mistress of the Robes	The Duchess of Sutherland
Ladies of the Bedchamber	Countess of Mount-Edgecumbe, Marchioness of Douro, Countess of Desart, Countess of Gainsboro', Countess of Charlemont, Viscountess Jocelyn, Viscountess Canning, Marchioness of Ely
Extra Lady of the Bedchamber	Lady Portman
Physicians	Charles Locock, M.D., Sir James Clark, Bart., and W. F. Chambers, M.D.
Surgeons	Sir P. Brodie, Bart., and R. Keate, Esq.

HER MAJESTY'S MINISTERS.

OF THE CABINET.

First Lord of the Treasury (Premier)		Lord John Russell
Lord Chancellor		Lord Truro
Lord President of the Council		The Marquis of Lansdowne
Lord Privy Seal		The Earl of Minto
Secretaries of State	Home	Sir George Grey, Bart.
	Foreign	Lord Palmerston
	Colonial	Earl Grey
Chancellor of the Exchequer		The Rt. Hon. Sir Charles Wood, Bt.
President of the Board of Control		Lord Broughton
President of the Board of Trade		Rt. Hon. H. Labouchere
First Lord of the Admiralty		The Right Hon. Sir F. Baring, Bart.
Chancellor of the Duchy of Lancaster		Earl of Carlisle
Chief Commissioner Woods & Forests		Lord Seymour
Postmaster-General		The Marquis of Clanricarde

IRELAND.

Lord-Lieutenant	The Earl of Clarendon
Lord Chancellor	The Right Hon. M. Brady
Chief Secretary	The Rt. Hon. Sir W. Somerville, Bt.
Attorney-General	The Right Hon. John Hatchell
Solicitor-General	Henry George Hughes, Esq.

SCOTLAND.

Lord High Constable	The Earl of Errol
Lord Privy Seal	Earl of Stair
Lord Advocate	Right Hon. James Moncrieff

GOVERNMENT OFFICES AND OFFICERS.

TREASURY,
WHITEHALL.

LORDS COMMISSIONERS.

Lord J. Russell, Sir Chas. Wood, Bart., H. Rich., Esq., R. M. Bellew, Esq., Sir W. G. Craig.
Secretaries, the Right Hon. W. G. Hayter, G. C. Lewis, Esq.
Assistant Secretary, Sir C. E. Trevelyan, K.C.B.
Principal Clerk, S. R. Leake, Esq.
Solicitor, G. Maule, Esq.

EXCHEQUER,
WHITEHALL-YARD.

Chancellor, the Right Hon. Sir Charles Wood, Bart.
Comptroller, Lord Monteagle.
Assistant, Sir Edward Ryan.
Chief Clerk, F. F. Ottey, Esq.
Accountant, G. S. Frederick, Esq.

HOME OFFICE,
WHITEHALL.

Secretary of State, Sir George Grey, Bart.
Under-Secretaries, H. Waddington, Esq., the Hon. E. P. Bouverie, M.P.
Chief Clerk, H. J. Knyvett, Esq.
Private Secretary, T. G. Baring, Esq.

FOREIGN OFFICE,
DOWNING STREET.

Secretary of State, Lord Palmerston.
Under-Secretaries, Lord Stanley of Alderley, H. U. Addington, Esq.
Chief Clerk, G. L. Conyngham, Esq.
Private Secretary, the Hon. Spencer Ponsonby.

COLONIAL OFFICE,
DOWNING-STREET.

Secretary of State, Earl Grey
Under-Secretaries, Frederick Peel, Esq., M.P., H. Merivale, Esq.
Assistant Secretary, T. F. Elliot, Esq.
Chief Clerk, Peter Smith, Esq.
Private Secretary, the Hon. H. C. Grey.

IRISH OFFICE,
18, GREAT QUEEN-STREET, WESTMINSTER.

Chief Secretary, the Right Hon. Sir W. M. Somerville, Bart.
Chief Clerk, George Trundle, Esq.
Assistant, Hon. S. D. Montague.
Private Secretary, H. Meredyth, Esq.
Counsel, E. Batty, Esq.

BOARD OF TRADE,
WHITEHALL.

President, the Rt. Hon. H. Labouchere, Vice-President, Earl Granville. The Cabinet Ministers, and the Right Hon. C. Arbuthnot.
Secretaries, G. R. Porter, Esq., J. Booth, Esq.
Secretaries' Assistants, H. Hobart, Esq., J. P. Ward, Esq.
Private Secretary to the President, L. Mallet, Esq.
Private Secretary to Lord Granville, E. A. Bowring, Esq.

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CANNON-ROW, WESTMINSTER.

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WHITEHALL.

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President, the Right Hon. Matthew Talbot Baines.
Secretaries, Lord Courtenay, C.B., — Grey, Esq.
Assistant Secretaries, William Golden Lumley, Esq., Barrister-at-Law, and H. Fleming, Esq.
Inspectors, Edward Gulson, Esq., W. H. Toovey Hawley, Esq., Richard Hall, Esq., Barrister-at-Law, Robert Weale, Esq., Sir J. James Walsham, Bart., Alfred Austin, Esq., Barrister-at-Law, G. G. Wandisford Pigott, Esq., J. T. Graves, Esq., Barrister-at-Law, Andrew Doyle, Esq., Barrister-at-Law, J. Manwaring, Esq., H. B. Farnall, Esq., E. Hurst, Esq.
Private Secretary to the President, Geo. Buller, Esq.
First Clerk, Mr. Francis Fletcher.
Board Clerk and Accountant, Mr. Hugh Owen.

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WHITEHALL.

Lords Commissioners, Sir Francis Baring, Rear Adm. Dundas, Adm. the Hon. F. Berkeley, Adm Houston Stewart, the Hon. W. Cowper, Capt. Milne.
Secretaries, John Parker, Esq., M.P., Captain W. A. B. Hamilton, R.N.
Private Secretary, Captain Charles Eden.
Chief Clerk, J. H. Hay, Esq.
Hydrographer, Admiral Sir F. Beaufort, K.C.B., F.R.S.
Assistant, M. Walker, Esq.

CIVIL DEPARTMENT, SOMERSET HOUSE.

Inspector-General, Sir W. Burnet.
Director-General of Works, Colonel Greene.
Storekeeper, Hon. R. Dundas.
Surveyor and Comptroller of Steam Department, Sir B. Walker.
Assistant Surveyor, J. Edye, Esq.
Chief Engineer, J. T. Lloyd, Esq.
Chief Clerks, J. M. Boddy, J. C. Parkin, W. Leyburn, B. Fosset, W. Scamp. Esqs.
Accountant, Sir J. T. Briggs.
Deputy Accountant, O. B. Woolsey, Esq.
Victualling, T. T. Grant, Esq.

ROYAL OBSERVATORY,
GREENWICH.

Astronomer Royal, G. B. Airy, Esq., M.A., D.C.L., F.R.S., F.R.A.S., &c.
First Assistant, Rev. R. Main, M.A., F.R.A.S.

ASTRONOMICAL DEPARTMENT.

Circle Superintendent, J. Henry, Esq.
Transit Superintendent, T. Ellis, Esq.
Altitude and Azimuth, E. Dunkin, Esq., F.R.A.S.

MAGNETICAL AND METEOROLOGICAL DEPARTMENT.

Superintendent, James Glaisher, Esq., F.R.S., F.R.A.S., Sec. of B.M.S.

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Lieutenant-Governor, Rear-Admiral Sir James Alexander Gordon. K.C.B.
Captains, G. Moubray, T. Dickenson, T. L. P. Langharne, W. Cuppage.
Commanders, C. Robinson, W. C. C. Dalyell, T. Colby, E. W. Garrett.
Lieutenants, F. Bedford, W. Rivers, M. Fitton, J. W. Rouse, D. O'Brien Casey, B. J. Loveless, J. Dornford, G. M. Monk.
Masters, T. Penrose, H. Smartley.
Chaplains, Rev. J. K. Goldney, Rev. E. Kitson.
Medical Inspector of Hospitals, Sir John Liddell, M.D.
Deputy Medical Inspector of Hospitals, Alexander Nisbet, M.D.
Surgeon, James M'Ternan.
Dispenser, J. Whitmarsh.
Assisting Dispenser, A. Yair.
Assistant Surgeons, N. Lyttelton, W. T. Domville, V. C. Clarke, R. Beith.

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Secretary, J. A. Lethbridge, Esq.

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GREENWICH.

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Chaplain, Rev. G. Fisher, M.A., F.R.S.
Head Master of the Nautical School, J. Riddle, Esq., F.R.A.S.
Head Master of Upper School, Rev. J. Hill, M.A., F.R.A.S.
Head Master of Lower School, E. Hughes, Esq., F.G.S.

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86, PALL MALL.

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Clerk, Col. Hon. G. Anson.
Storekeeper, Capt. Sir Thomas Hastings, R.N.
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Aide-de-Camp, Major H. W. Paget.
Secretary, G. Butler, Esq.
Solicitor, T. Clark, Esq.

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WHITEHALL.

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Assistant Paymaster-General, W. G. Anderson, Esq.
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Military Secretary, Lieut.-General Lord F. Somerset.
Aides-de-Camp, Colonel Hon. C. Anson, Colonel Marquis of Douro, Capt. Earl of March, Captain Marquis of Worcester.
Assistants to Military Secretary, F. H. Lindsay, Esq., F. Fergusson, Esq.

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HORSE-GUARDS.

Adjutant-General, Major-General G. Brown, C.B.
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First Clerk, Richard Cannon, Esq.
Confidential Clerk, E. G. Syms, Esq.
Assistant, Col. Sulivan.
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Assistants, Lieut.-Col. Richard Airey, Lieut.-Col. Enoch.
First Clerk, T. Marsh, Esq.
Confidential Clerk, J. O'Neil, Esq.

LAW OFFICERS OF THE CROWN.

Attorney-General, Sir A. J. E. Cockburn.
Solicitor-General, Sir W. P. Wood.

ADMIRALTY COURT,
2, PAUL'S BAKEHOUSE-COURT, DOCTORS' COMMONS.

Judge, Rt. Hon. S. Lushington, D.C.L.
Dean of the Arches, the Right Hon. Sir Herbert Jenner Fust.
Registrar, H. B. Swabey, Esq.
Queen's Advocate, Sir J. Dodson, LL.D.
Admiralty Advocate, J. Phillimore, D.C.L.
Queen's Proctor, F. H. Dyke, Esq.
Admiralty Proctor, W. Townsend, Esq.

JUDGE ADVOCATE-GENERAL'S OFFICE,
35, GREAT GEORGE-ST., WESTMINSTER.

Judge Advocate-General, the Right Hon. Sir David Dundas, M.P.
Deputy, Stephen C. Denison, Esq.
Chief Clerk, William Henry Hughes, Esq.
Second Clerk, Jonathan Scollick, Esq.
Third Clerk, Robert Champneys Mundell, Esq.

WAR OFFICE,
WHITEHALL.

Secretary-at-War, Rt. Hon. Fox Maule.
Deputy, B. Hawes, Esq.
Chief Examiner, R. C. Kirby, Esq.
First Clerk, J. Borrow, Esq.
Private Secretary, G. D. Ramsay, Esq.

WOODS AND FORESTS,
2, WHITEHALL-PLACE.

Commissioners, the Hon. C. A. Gore, and the Right Hon. T. F. Kennedy.

RANGERS, KEEPERS, ETC.

Windsor Great Park, Prince Albert.
Hyde Park, St. James's Park } His Grace the Duke of Wellington.
Richmond Park, H.R.H. the Duchess of Gloucester.
Greenwich Park, the Earl of Aberdeen.
Hampton Court, Lady Bloomfield.
Whittlebury Forest, Duke of Grafton.
Waltham Forest, Earl of Mornington.
Wychwood Forest, Lord Churchill.
Dean Forest, Lord Seymour,

QUEEN'S MINT,
LITTLE TOWER-HILL.

Master Worker, Sir J. Herschel, Bart., F.R.S.
Deputy, Capt. Harness.
Comptroller, W. H. Barton, Esq.

STATE PAPER OFFICE,
12, DUKE-STREET, WESTMINSTER.

Keeper, Right Hon. H. Hobhouse, F.R.S.
Deputy, C. Lechmere, Esq.
Chief Clerk, R. Lemon, Esq.

PRIVY SEAL,
28, ABINGDON-STREET, WESTMINSTER.

Lord Privy Seal, Earl of Minto, G.C.B.
Private Secretary, Hon. C. J. B. Elliot.
Chief Clerk (by patent), R. Eden, Esq.
Keeper of Records, R. Eden, Esq.
Clerk, W. Goodwin, Esq.

SIGNET OFFICE,
28, ABINGDON-STREET.

Keepers of the Signet, the Secretaries of State.
Chief Clerk, Rev. W. H. E. Bentinck.
Deputy, H. D. Scott, Esq.
Keeper of the Records, H. W. Sanders, Esq.

COPYHOLD, TITHE, AND ENCLOSURE COMMISSION,
WHITEHALL.

W. Blamire, Esq., T. W. Buller, Esq., G. Darby, Esq.

REGISTRAR OF DESIGNS OFFICE,
WHITEHALL.

Registrar, Clement Johnson, Esq.
Assistant Registrar, Hon. E. C. Curzon.
Chief Clerk, J. Hill Bowen, Esq.

COLONIAL LAND AND EMIGRATION COMMISSIONERS,
9 AND 15, PARK-STREET, WESTMINSTER.

T. W. Clinton Murdoch, Esq., Charles Alex. Wood, Esq., Frederick Rogers, Esq.
Secretary, S. Walcott, Esq.

CUSTOM HOUSE.

Chairman, Sir Thomas Fremantle.
Deputy, the Right Hon. G. R. Dawson.
Commissioners, H. Richmond, Esq., S. G. Lushington, Esq.,— T. P. Dickenson, Esq., F. Goulburn, Esq., C. C. Smith, Esq., Capt. Saurin, Hon. S. E. Spring Rice.
Secretary, W. Maclean, Esq.
Assistant, — Gardner, Esq.
Receiver-General, Sir F. Doyle.
Comptroller-General, W. Dickinson, Esq.
Solicitor, — Hammill, Esq.
Surgeon, J. O. McWilliam, Esq., M.D.

INLAND REVENUE OFFICES,
EXCISE DEPARTMENT, BROAD-STREET, CITY; STAMP AND TAX DEPARTMENT, SOMERSET-HOUSE.

Chairman, John Wood, Esq.
Deputy Chairman, J. Thornton, Esq.
Commissioners, Charles Powlett Rushworth, Henry Frederick Stephenson, Charles John Herries, Alfred Montgomery, Charles Pressly, Esqrs.
Secretary, J. C. Freeling, Esq.
Assistant Secretary, T. Keogh, Esq.
Solicitor, Joseph Timm, Esq.
Assistant Solicitor, Hugh Tilsley, Esq.
Receiver-General, J. Brotherton.
Comptroller of Legacy Duties, Charles Trevor, Esq.

METROPOLIS ROADS,
22, WHITEHALL-PLACE.

Secretary, J. L. Panter, Esq.
Surveyor General, Sir Jas. M'Adam.
Accountant, V. C. Wright, Esq.
Inspector, H. Browse, Esq.
Solicitor, J. W. Lyon, Esq.

OFFICE OF METROPOLITAN BUILDINGS,
6, ADELPHI TERRACE.

Official Referees, W. Hosking, Esq., A. Poynter, Esq., J. Shaw, Esq.
Registrar, A. Symonds, Esq.
Examiners, Philip Hardwicke, Esq., J. Pennethorne, Esq., T. Cubitt, Esq.

GENERAL REGISTER OFFICE,
WHITEHALL.

Reg.-General, George Graham, Esq.
Chief Clerk, Thomas Mann, Esq.

STATISTICAL DEPARTMENT.

Superintendent, William Farr, Esq.

RECORD DEPARTMENT.

First Clerk, Edward Edwards, Esq.
Assistant, William Owen, Esq

CORRESPONDENCE DEPARTMENT.

First Clerk, George Sowray, Esq.

ACCOUNTANT'S DEPARTMENT.

First Clerk, Charles Henry Anderson, Esq.

BOARD OF TRADE.—RAILWAY DEPARTMENT.

Commissioners, the Right Hon. H. Labouchere (President), Earl Granville.
Secretaries, Capt. Symons, J. Booth, Esq.

CITY OFFICERS.

LORD MAYOR.

Elected September 29th—Sworn in November 9th.

The Right Honourable WILLIAM HUNTER, Coleman-street Ward, 1843.

SHERIFFS.

Elected June 24th—Sworn in September 28th.

Richard Swift, Esq. | Thomas Cotterell, Esq.

UNDER-SHERIFFS.

J. Millard, Esq. | J. Hopwood, Esq.

ALDERMEN.

	When chosen Aldermen.
THE FOLLOWING HAVE NOT PASSED THE CHAIR.	
Challis, Thomas, Esq., Cripplegate	1843
Sidney, Thomas, Esq., M.P., Billingsgate	1844
Moon, F. G., Esq., Portsoken	1844
Salomons, David, Esq , Cordwainer	1848
Finnis, Thomas Quested, Esq., Tower	1848
Lawrence, William, Esq., Bread-street	1848
Carden, Sir Robert Walter, Dowgate	1849
Wire, David W., Esq., Walbrook	1851
Cubitt, Sir William, Langbourne	1851
Carter, J., Esq., Cornhill	1851
THE FOLLOWING HAVE PASSED THE CHAIR.	
Thompson, W. Esq., M.P., Bridge Without	1821
Key, Sir John, Bart., Cheap	1823
Laurie, Sir Peter, Knt., Aldersgate	1826
Farebrother, C., Esq., Lime-street	1826
Copeland, W. T. Esq., M.P., Bishopsgate	1829
Kelly, T., Esq., Farringdon Within	1830
Wilson, Samuel, Esq., Castle Baynard	1831
Marshall, Sir C., Knt., Bridge Within	1832
Humphery, J., Esq., M.P., Aldgate	1835
Magnay, Sir William, Bart., Vintry	1838
Carroll, Sir George, Candlewick	1840
Hooper, John K., Esq., Queenhithe	1840
Duke, Sir James, M.P., Farringdon Without	1840
Farncombe, Thomas, Esq., Bassishaw	1841
Musgrove, Sir John, Bart., Broad-street	1842

EAST INDIA COMPANY.

Six Directors are elected annually in April, when six go out by rotation. Each Director serves four years. The figure prefixed denotes the number of years each has to serve.

DIRECTORS.

(1) CHAIRMAN—John Shepherd, Esq., Worcester Park, Surrey.
(2) DEPUTY CHAIRMAN—Sir James Weir Hogg, Bart., M.P., 16, Grosvenor-square.

(3) William Wigram, Esq.
(2) Sir Robert Campbell, Bart.
(4) John Lock, Esq.
(4) Charles Mills, Esq.
(3) John Petty Muspratt, Esq.
(1) Henry Alexander, Esq.
(3) Lieutenant-General Sir James Law Lushington, G.C.B.
(4) Henry Shank, Esq.
(4) John Cotton, Esq.
(2) Sir Henry Willock, K.L.S.
(3) Martin Tucker Smith, Esq., M.P.
(2) Lieut.-Col. William Henry Sykes
(4) William Henry Chicheley Plowden, Esq., M.P.
(3) Elliot Macnaghten, Esq.
(1) Major James Oliphant
(2) John Clarmont Whiteman, Esq.
(1) Hon. Wm. Henry Leslie Melville
(1) Major-Gen. James Caulfeild, C.B.
(2) William Joseph Eastwick, Esq.
(1) Henry Thoby Prinsep, Esq.
(3) William Dent, Esq.
(4) John Harvey Astell, Esq.

THE FOLLOWING GENTLEMEN ARE OUT BY ROTATION.

W. Butterworth Bayley, Esq.
Russell Ellice, Esq.
Sir Richard Jenkins, G.C.B.
Ross Donnelly Mangles, Esq., M.P.
John Masterman, Esq., M.P.
Major John Arthur Moore

BANK OF ENGLAND.

GOVERNOR—T. Hankey, Jun., Esq.—DEPUTY GOVERNOR—J. G. Hubbard, Esq.

DIRECTORS.

Thomas Baring, Esq.
Henry Wollaston Blake, Esq.
Edward Henry Chapman, Esq.
Robert Wigram Crawford, Esq.
William Cotton, Esq.
Benjamin Buck Greene, Esq.
John Oliver Hanson, Esq.
John Benjamin Heath, Esq.
Kirkman Daniel Hodgson, Esq.
Henry Lancelot Holland, Esq.
Thomas Newman Hunt, Esq.
Charles Frederick Huth, Esq.
Alfred Latham, Esq.
George Lyall, jun. Esq.
Thomas Masterson, Esq.
Alexander Matheson, Esq.
James Morris, Esq.
George Warde Norman, Esq.
John Horsley Palmer, Esq.
Sir John Henry Pelly, Bart.
Henry James Prescott, Esq.
Thomas Charles Smith, Esq.
Thomas Matthias Weguelin, Esq.
Francis Wilson, Esq.

LAW COURTS.

CHANCERY.—Lord High Chancellor, Lord Truro. Master of the Rolls, Sir John Romilly. Vice-Chancellors: Sir George Turner, Sir Richard Kindersley, Sir James Parker.

JUDGES OF APPEAL.—Sir James K. L. Bruce, Lord Cranworth.

QUEEN'S BENCH.—Lord Chief Justice, Lord Campbell. Judges, Sir John Patteson, Sir John T. Coleridge, Sir Wm. Wightman, Sir Wm. Erle.

COMMON PLEAS.—Lord Chief Justice, Sir John Jervis. Judges, Sir Wm. Hen. Maule, Sir C. Cresswell, Sir Edw. Vaughan Williams, Sir Thos. N. Talfourd.

EXCHEQUER.—Lord Chief Baron, Sir Frederick Pollock. Barons, Sir James Park, Sir Edw. H. Alderson, Sir Thomas J. Platt, Sir Samuel Martin.

COURT OF BANKRUPTCY.

London.—Joshua Evans, Esq., Robert George Cecil Fane, Esq., Edward Goulburn, D.C.L., Serjeant-at-Law, John Samuel Martin Fonblanque, Esq., Edward Holroyd, Esq.
Birmingham.—John Balguy, Q.C., Esq., and Edmund Robert Daniell, Esq.
Liverpool.—Ebenezer Ludlow, Esq., Serjeant, and H. J. Perry, Esq.
Manchester.—Walter Skirrow, Esq., and Wm. Thos. Jemmett, Esq.
Leeds.—Martin John West, Esq., and W. S. Ayrton, Esq.
Bristol.—H. J Stephen, Esq., Serjeant, and Richard Stevenson, Esq.
Exeter.—Montague Baker Bere, Esq.
ewcastle.—N. Ellison, Esq.

COMMERCIAL COMPANIES.

SOUTH SEA COMPANY, Threadneedle-street.—Governor, Charles Bosanquet, Esq. — Sub-Governor, C. Franks, Esq.—Dep.-Gov., Hon. P. P. Bouverie.—Officers: Cashier, J. T. Viner, Esq. Sec., C. F. Gibson, Esq. Accountant, W. R. Arnold, Esq. Chief Clerk in Transfer Office, John Jesse, Esq. Solicitor, Henry Wordsworth, Esq.

EASTLAND COMPANY, 25, Birchin-lane. —Governor, Stephen Thornton, Esq. —Dep.-Gov., J. Cattley, Esq.—Treasurer, Hon. J. T. L. Melville, Esq. Sec., Thomas Cope, Esq.

RUSSIA COMPANY, 25, Birchin-lane. —Gov., Thomas Tooke, Esq.—Consuls, John Thornton, Henry Cayley, Thos. Tooke, jun., S. E. Thornton, Esqrs.—Secretary, T. Cope, Esq.

HUDSON'S BAY COMPANY, Fenchurch-street.—Gov., Sir J. H. Pelly, Bart. —Dep.-Gov., Andrew Colville, Esq. —Sec., Arch. Barclay, Esq.—Assistant Sec., Wm. Smith, Esq.

CANADA COMPANY.—Governor, Chas. Franks, Esq.—Dep.-Governor, Jas. Mackillop, Esq.—Sec., John Perry, Esq.

LONDON DOCK COMPANY.—House, New Bank Buildings.—Chairman, J. Cattley, Esq.—Sec., J. D. Powles, Esq.

ST. KATHERINE'S DOCK COMPANY.—House, St. Katherine's Docks.—Chairman, Thos. Tooke, E-q.—Sec., Sir J. Hall, K.C H.

EAST AND WEST INDIA DOCK COMPANY.—House, No. 8, Billiter-square. Chairman, John Scott, Esq.—Dep.-Chairman, E. M. Daniel, Esq.

COMMERCIAL DOCK COMPANY. — House, 106, Fenchurch-street.—Chairman, Nat. Gould, Esq.—Sec., H. K. Smithers, jun., Esq.

GRAND SURREY DOCK COMPANY.—Office, 2, White Lion-court, Cornhill.—Chairman, Josiah Wilson, Esq. —Dep.-Chairman, William Curling, Esq.—Sec. William M'Cannon, Esq.

BANKERS IN LONDON.

Agra and United Service, 15, Old Jewry Chambers.
Bank of Australasia, 3, Austin Friars.
——— British North America, 7, St. Helen's-place.
——— Ceylon, 72, Old Broad-street.
——— South Australia, 54, Old Broad-street.
Barclay, Bevan, Tritton, and Co., 54, Lombard-street.
Barnard, Drewett, Dimsdale, and Barnard, 50, Cornhill.
Barnet, Hoares, and Co., 62, Lombard-street.
Bosanquet, Franks, and Whatman, 73, Lombard street.
Bouverie, Norman, and Murdoch, 11, Haymarket.
British Colonial, 50, Moorgate-street.
Brown and Co., 25, Abchurch-lane.
Brown, Janson, and Co., 32, Abchurch-lane.
Call (Sir W. P., Bart.), Marten, and Call, 25, Old Bond-street.
Child and Co., 1, Fleet-street.
Cockerell and Co., 8, Austin Friars.
Cocks, Biddulph, and Co., 43, Charing Cross.
Colonial Bank, 13, Bishopsgate Within.
Commercial Bank of London, Lothbury, and 6, Henrietta-street.
Coutts and Co., 59, Strand.
Cunliffes, Brooks, and Co., 24, Lombard-street.
Cunliffe (Roger), 24, Bucklersbury.
Curries and Co., 29, Cornhill.
De Lisle, Janvrin, and Co., 16, Devonshire-square, Bishopsgate.
Dixon, Brooks, and Dixon, 25, Chancery-lane.
Drummonds, 49, Charing Cross.
East India Bank, 64, Moorgate-street.
Feltham (John) and Co., 42, Lombard-street.
Finsbury Bank, 98, Goswell-road.
Fullers and Co, 66, Moorgate-street.
Glyn, Halifax, Mills, and Co., 67, Lombard-street.
Goslings and Sharpe, 19, Fleet-street.
Hanburys, Taylor, and Lloyds, 60, Lombard-street.
Hankeys and Co., 7, Fenchurch-street.
Herries, Farquhar, Davidson, Chapman, and Co., 16, St. James's-street.
Heywood, Kennards, and Co., 4, Lombard-street.
Hoares and Co., 37, Fleet-street.
Hopkinson, Barton, and Co., 3, Regent-street, Waterloo-place.
Ionian Bank, 6, Great Winchester-street.
Ireland Agricultural and Commercial, 14, St. Helen's-place.
Ireland, Nat. Bank of, 13, Old Broad-street.
Ireland, Prov. Bank of, 42, Old Broad-street.
Johnston (H. and I.) and Co., 15, Bush-lane.
Jones Loyd and Co., 43, Lothbury.
London and Westminster Bank, Lothbury; St. James's-square; 213, Holborn; 12, Wellington-street, Southwark; 87, High-street, Whitechapel; 155, Oxford-street.
London Joint Stock Bank, 5, Princes-street, Mansion House; and 60, Pall Mall.
London and County Joint Stock Banking Company, 21, Lombard-street.
London and Dublin Bank, 5, Old Broad-street.
Lubbock (Sir John, Bart.) Foster, and Co., 11, Mansion-house-street.
Martin, Stone, and Martins, 68, Lombard street.
Masterman, Peters, Mildred, Masterman, and Co., 35, Nicholas-lane.
National Provincial Bank of England, 112, Bishopsgate-street Within.
Pocklington and Lacy, 60, West Smithfield.
Praed and Co., 189, Fleet-street.
Prescott, Grote, Cave, and Cave, 62, Threadneedle-street.
Price, Marryatt, and Co., King William-street, City.
Puget, Bainbridges, and Co., 12, St. Paul's Church-yard.
Ransom and Co., 1, Pall Mall East.
Roberts, Curtis, and Co., 15, Lombard-street.
Rogers, Olding, Sharpe, and Co., 29, Clement's-lane.
Royal Bank of Australia, 2, Moorgate-street.
Sapte, Muspratt, Banbury, and Co., 77, Lombard-street.
Scott (Sir Samuel, Bart.) and Co., 1, Cavendish-square.
Smith, Payne, and Smiths, 1, Lombard-street.
South Australian, 53, Old Broad-street.
Spooner, Attwoods, and Co., 27, Grace-church-street.
Stevenson, Salt, and Sons, 20, Lombard-street.
Strahan, Paul, and Paul, 217, Strand.
Twinings (Richard, George, John Aldred Richard) and Co., 215, Strand.
Union Bank of Australia, 38, Old Broad-street.
Union Bank of London, 2, Princes-street, City; 4, Pall Mall East; 4, Argyll-place, Regent-street.
Williams, Deacon, Labouchere, and Thornton, 20, Birchin-lane.
Willis, Percival, and Co., 76, Lombard-street.

CONSULATE AND PASSPORT OFFICES.

AUSTRIA.—Embassy, 7, Chandos-street, Cavendish-square, between 12 and 2.
BELGIUM.—Legation, 50, Portland-place, between 11 and 3; delivered next day between 11 and 2, gratis; at the Consul's office, 3, Copthall-court, between 10 and 4—fee 5s.
BAVARIA.—The Minister, 3, Hill-street, Berkeley-square, when personally known to him; or at the Consul's Office, 33½, Great St. Helen's.
BRAZIL.—Legation, 41, York-street, Portman-square, between 12 and 2, gratis.
DENMARK.—6, Warnford-court, between 10 and 4—fee 10s. 6d.; under special circumstances at the Embassy, 2, Wilton-terrace, Belgrave-square.
FRANCE.—French passport-office, 47, King William-street, City, from 12 till 4.

BILLS AND RECEIPT STAMPS.

INLAND BILLS AND PROMISSORY NOTES.

		Not exceeding 2 months.	Exc. 2 m.
		s. d.	s. d.
If	£2 0	£5 5 1 0	1 6
Above	5 5	20 1 6	2 0
	20	30 2 0	2 6
	30	50 2 6	3 6
	50	100 3 6	4 6
	100	200 4 6	5 0
	200	300 5 0	6 0
	300	500 6 0	8 6
	500	1000 8 6	12 6
	1000	2000 12 6	15 0
	2000	3000 15 0	25 0
	3000 and upwards		25 0	30 0

BILLS OF EXCHANGE.

FOREIGN.

	s.	d.
Not exceeding £100	1	6
Above £100 & not exc. 200	3	0
„ 200 „ 500	4	0
„ 500 „ 1000	5	0
„ 1000 „ 2000	7	6
„ 2000 „ 3000	10	0
„ 3000	15	0

RECEIPTS.

	s.	d.
If £5 and under £10	0	3
10 „ 20	0	6
20 „ 50	1	0
50 „ 100	1	6
100 „ 200	2	6
200 „ 300	4	0
300 „ 500	5	0
500 „ 1000	7	6
1000 or upwards	10	0
Receipts in full	10	0

PROTESTS.

BILL OR NOTE.	s.	d.
Less than... ... £20 ...	2	0
£20 and under 100 ...	3	0
100 „ 500 ...	5	0
500 or upwards	10	0
Of any other kind	5	0
Bills of Lading	0	6
Charterparty	5	0

DUTIES ON LEGACIES, &c.

Of the value of £20, or upwards.

To children, or their descendants, or lineal ancestors of the deceased	£1	0	0	Uncle or aunt, or their descendants £5	0	0
Brother or sister, or their descendants	3	0	0	Grand-uncle or aunt, or their descendants 6	0	0
				All other relations, or strangers 10	0	0

The husband or wife of the deceased not chargeable with duty.

APPRENTICES' INDENTURES.

Premium not amounting to	£30	£1	0	£400 & not amounting to	£500	£25	0
30 and not amounting to	£50	2	0	500 „ „	600	30	0
50 „ „	100	3	0	600 „ „	800	40	0
100 „ „	200	6	0	800 „ „	1000	50	0
200 „ „	300	12	0	1000 or upwards		60	0
300 „ „	400	20	0	Duplicate...		0	5

LICENSES.

For Marriage, if special	£5 0
Ditto, if not special	0 10
For Bankers	30 0
For Pawnbrokers, within the limits of the twopenny post ...	15 0
Elsewhere	7 10
For Appraisers	2 0
For Hawkers and Pedlars, on foot	4 0
Ditto, with one horse, ass, or mule	8 0
Stage Carriage License, for every carriage	3 3
Hackney Carriage License, for every carriage	5 0
Selling Beer, to be drunk on the Premises	3 3
Ditto, not to be drunk on the Premises	1 1

NEW HOUSE-TAX.

This Act repeals the duties payable on dwelling-houses according to the number of windows or lights, and grants in lieu thereof other duties on inhabitant houses, according to their annual value. It came into operation in England on the 5th of April, and in Scotland after Whitsunday Term, 1851. No market-garden or nursery-ground is to be included in the valuation of any dwelling-house. The duties made payable by this Act are:—

For every inhabited Dwelling House which, with the Household and other Offices, Yards, and Gardens therewith occupied and charged, is or shall be worth the Rent of Twenty Pounds, or upwards, by the year,—

Where any such Dwelling House shall be occupied by any person in Trade, who shall expose to sale and sell any Goods, Wares, or Merchandise, in any Shop or Warehouse, being part of the same Dwelling House, and in the Front and on the Ground or Basement Story thereof;

And also where any such Dwelling House shall be occupied by any Person who shall he duly licensed hy the laws in force to sell therein hy retail Beer, Ale, Wine, or other Liquors, although the room or rooms thereof in which any such Liquors shall be exposed to sale, sold, drunk, or consumed, shall not be such Shop or Warehouse as aforesaid;

And also where any such Dwelling House shall be a Farm-house occupied by a Tenant or Farm Servant, and *bonâ fide* used for the purposes of Husbandry only,

There shall be charged for every Twenty Shillings of such annual value of any such Dwelling House, the sum of Sixpence;

And where any such Dwelling House shall not be occupied and used for any such purpose, and in manner aforesaid, there shall be charged for every Twenty Shillings of such annual value the sum of Ninepence.

*** By cap. 17, 3 and 4 Vict., an additional £10 per cent. is imposed upon all the Assessed Taxes, Customs, and Excise.

HORSE TAX. FOR RIDING, OR DRAWING CARRIAGES.

No.	Each Horse.	No.	Each Horse.	No.	Each Horse.	No.	Each Horse.
	£ s. d.		£ s. d.		£ s. d.		£ s. d.
1	1 8 9	6	2 18 0	11	3 3 6	16	3 3 9
2	2 7 3	7	2 19 9	12	3 3 6	17	3 4 0
3	2 12 3	8	2 19 9	13	3 3 9	18	3 4 6
4	2 15 0	9	3 0 9	14	3 3 9	19	3 5 0
5	2 15 9	10	3 3 6	15	3 3 9	20	3 6 0

Horses let to hire with post duty, each	£1	8	9
Race Horses, each	3	10	0
Horses rode by hutchers in their trade, each	1	8	9
Where two only are kept, the second at	0	10	6
Horses for riding, and not exceeding thirteen hands, each ...	1	1	0
One horse used by a bailiff on a farm	1	5	0
Other horses, thirteen hands high, and mules, each... ...	0	10	6

A horse used for riding by any one occupying a farm of less annual value than £500, is exempt, provided not more than one is kept; as are also horses employed by market-gardeners in their business.

DUTIES ON CARRIAGES.

WITH FOUR WHEELS.

No.	Per Carriage for private use.	No.	Per Carriage for private use.	No.	Stage-coaches and post-chaises.	No.	Stage-coaches and post-chaises.
	£ s. d.		£ s. d.		£ s. d.		£ s. d.
1	6 0 0	5	7 17 6	1	5 5 0	5	26 5 0
2	6 10 0	6	8 4 0	2	10 10 0	6	31 10 0
3	7 0 0	7	8 10 0	3	15 15 0	7	36 15 0
4	7 10 0	8	8 16 0	4	21 0 0	8	42 0 0

WITH TWO WHEELS.

	£	s.	d.
Carriages with two wheels, each	3	5	0
Ditto, drawn by two or more horses, or mules	4	10	0
For every additional body used on the same carriage ...	1	11	6
For every additional body	3	3	0
Carriages let by coachmakers, without horses	6	0	0

For every carriage with four wheels, being of less diameter than thirty inches each, where drawn hy ponies or mules, above twelve and not exceeding thirteen hands, per annum £3 5*s.*; if with less than four wheels, and the ponies not exceeding twelve hands, and not let for hire, exempt. For every carriage with four wheels, drawn by one horse and no more, per annum, £4 10*s.* Carriages with less than four wheels, drawn by one horse, and constructed and marked as described by Act 6 and 7 Wm. IV. c. 65, and 1 Vict. c. 61, not exceeding £21 in value; also common stage carts, constructed for the carriage of goods, and occasionally used for riding, are exempt.

DOGS.

	£	s.	d.
For every greyhound	1	0	0
For every bound, pointer, setting dog, spaniel, terrier, or lurcher, and for every dog, where two or more are kept, of whatever denomination they may he (except greybounds)	0	14	0
For every other dog, where one only is kept	0	8	0
Compounding a pack of hounds	36	0	0

Farmers with farms under £100 value, and shepherds, are exempt for dogs kept for the care of sheep.

PENALTIES UNDER THE STAMP ACT.

For acting as an *Appraiser* without a license, £50.

For writing an *Appraisement* upon paper not duly stamped, £50.

Apprentices' Indentures to state the real amount of premium, in proportion to which the stamp duty is charged, on penalty of forfeiting double the amount of premium.

For *Attorneys* and *Solicitors* acting without having been admitted, £100.—For acting without certificate, £50.

For drawing a *Bill* or *Promissory Note* upon unstamped paper, or upon paper insufficiently or wrongly stamped, £50.—For post-dating *Bills of Exchange*, £100.

For drawing a *Cheque* more than 15 miles from the place where made payable, £100.—For receiving the same in payment, £20.—For Bankers paying the same, £100.

For setting out wrong amount of consideration money in *Conveyance*.—On the Attorney, £500; on the Purchaser and Seller, £50, and five times the amount of the excess of duty, payable on the full consideration money which ought to have been set forth; and the Purchaser may recover hack so much of the consideration money as shall not be stated.

For selling *Plate* without a license, £20: gold, above 2 dwts.; silver, 5 dwts.

For selling *Patent Medicines*, &c., without a license, £20. Without a stamp, £10.

For printing a *Newspaper* without first making declaration as to the ownership, &c., £50 for every day such paper shall be printed or published.—For printing without stamps, on each paper issued, £20.

For *Pawnbrokers* taking pledges without a license, £50. For selling *Plate* without a license, £20. For selling plate without being duly stamped, £50.

For taking possession of the effects of any one deceased without taking out *Letters of Administration*, £100.

For giving an unstamped receipt for money amounting to £5 and upwards, £10.

For giving a receipt on an insufficient stamp, £10.

For refusing to give a receipt when demanded for money paid, and amounting to £5, £10.

For selling playing-cards without an Ace of Spades duly stamped, £10. For being in possession of unstamped playing-cards, £5 per pack.

Vendors of Stamps may purchase an Allowance Ticket, but must not repurchase a Stamp.

DIRECTIONS FOR MAKING A WILL.

SPECIFIED TO BE USED SINCE DECEMBER, 1837.

The Will must be signed at the foot or end of it by the Testator, or hy some other person in his presence, and by his direction.

The signature must be made or acknowledged by the Testator in the presence of *two* or more witnesses present at the same time.

The witnesses must attest and subscribe the Will in the presence of the Testator.

It will then he sufficient for the passing of real or personal property, or both.

Note. The whole of the above ceremonies will be required whether the Will contain the most trifling gift, or disposes of property of the first magnitude

And note further. A gift to an attesting witness, or to the wife or husband of an attesting witness, is void; therefore, neither a legatee nor the wife nor husband of a legatee should be made an attesting witness to a Will.

No particular form of attestation is necessary, but the following may be used. If used, it must he copied and written at the end of the Will below the signature of the testator:—

"Signed hy the said , the Testator, in the presence of us, present at the same time, who in his presence have subscribed our names as Witnesses."

The Testator should appoint one or more Executors.

If, after the execution of the Will, any alteration he made in it, by obliteration, interlineation, or otherwise, care must be taken that such alteration be executed in like manner as the Will itself. And it will be desirable also that the names of the Testator and witnesses be written on the margin of the Will, opposite every such obliteration, interlineation, or other alteration.

Wills may at any time be revoked; but Wills made by single persons or widowers are absolutely void on their marriages after the date of the Wills, but such wills may be re-executed hy new delivery with two attesting witnesses, or by a Codicil similarly executed, expressive of the Testator's wish to carry into effect the provisions of the original Will.

N.B.—No person who is under twenty-one can make a Will.

SIR JOSEPH PAXTON, KNT., F.L.S., ARCHITECT OF THE CRYSTAL PALACE.

HISTORY OF THE GREAT EXHIBITION.

"THE Great Exhibition of the Works of Industry of all Nations, 1851," will stand recorded in the annals of future ages as the first event of the kind which has occurred in the history of man. We say the first event "of the kind," for, although many expositions of industrial productions have been held from time to time in various other countries, and also recently in some of our own cities, they have always been restricted to the works of the particular nations, or localities, to the exclusion of the rest of the world. Furthermore, it may be added, that expositions, regulated by these principles, were in reality little else than large fairs, where the immediate extension of individual commercial dealings was the main object held in view.

England, then, has been the first not only to throw open her own shop for the inspection of all the world, but to invite all the world to compete with her in it, and that in every walk and department of business. It was a bold, a courageous, a generous step; and although in the working out of the details, and in some of the accidental incidents inseparable from all great undertakings, she may not fancy herself adequately requited, upon the whole we do not think she will have reason to repent what she has done.

We will now briefly trace the history of the events which led to this undertaking; an undertaking the honour of which, we must state at the outset, is mainly attributable to the Society of Arts of London. As early as the year 1756–57, the Society of Arts of London offered prizes for specimens of manufactures, tapestry, carpets, porcelain, &c., and exhibited the works which were offered in competition; and about the same period, the Royal Academy had organised its exhibitions of paintings, sculptures, and engravings.

The first exhibition of industrial productions in France occurred in 1789, being confined to Gobelins tapestry and Sèvres china, exposed for sale for the benefit of the workmen who were in a distressed condition; the next in 1798, which included sumptuous furniture and other articles of *luxe;* the next in 1801, a fourth in 1802, and a fifth in 1806. But it was not till the Restoration in 1819, that the expositions of French industry began to take place systematically, and to include that larger and more varied class of objects adapted to the requirements and means of the masses. The eleventh and last great exposition took place in the Champs Elysées in 1849 (the previous one having taken place in 1844), in a building erected for the purpose, which covered more than five acres of ground, and in which the productions of 4494 exhibitors were displayed. The Bavarians and the Belgians have of late years imitated the example set by France, and with good success. Manchester, Leeds, Birmingham, Dublin, and other towns, have also held similar exhibitions, being more properly styled bazaars; and in 1845 the great Free Trade Bazaar was held at Covent Garden Theatre, which was open twelve days.

We now come to trace what led to the infusion of a more cosmopolitan principle in these exhibitions, so signally exemplified in the Great Exhibition which has just closed. As early as 1845, in consequence of the good success which had attended the Paris Exhibition of the preceding year, the Society of Arts made some efforts to move our Government to promote or favour a somewhat similar exposition in this country, but without success. Governments are always slow to "move on;" and there being no precedent for such a proceeding in the books of the Treasury, how could they be supposed capable of doing anything in the matter? Even so late as the year 1848, a proposal to establish a self-supporting Exhibition of British Industry, to be controlled by a Royal Commission, was submitted to Prince Albert (then President of the Society of Arts), and by him laid before the court; but again without leading to any result. Meantime, however, the Society of Arts had begun to substitute action for theory, example for persuasion:—

"In 1847 (we quote from the Introduction to the Official Catalogue) the Council of the Society substituted action for theory, and, in the midst of discouragement, established a limited exhibition of

manufactures, professedly as the beginning of a series. The success of this exhibition determined the Council to persevere, and to hold similar exhibitions annually. Accordingly, in the next year, the experiment was repeated with such greatly increased success, that the Council felt warranted in announcing their intention of holding annual exhibitions, as a means of establishing a quinquennial Exhibition of British Industry, to be held in 1851. Having proceeded thus far, the Council sought to connect the Schools of Design, located in the centres of manufacturing industry, with the proposed Exhibition, and obtained the promised co-operation of the Board of Trade, through the President, Mr. Labouchere; moreover, with a view to prepare a suitable building, they secured the promise of a site from the Earl of Carlisle, then Chief Commissioner of Woods and Forests, who offered either the central area of Somerset House, or some other Government ground. In the year 1849, the exhibition, still more successful than any preceding, consisted chiefly of works in the precious metals, some of which were graciously contributed by her Majesty. To aid in carrying out their intention of holding a National Exhibition in the year 1851, the Council of the Society caused a report on the French Exposition, held in 1849, to be made for them and printed. A petition was also presented by the Council to the House of Commons, praying that they might have the use of some public building for the Exhibition of 1851, which was referred to the Select Committee on the School of Design."

It should be stated that, in February, 1849, M. Buffet, the French Minister of Agriculture and Commerce, addressed a circular to the Chambers of Commerce of France, proposing that specimens of skill in agriculture and manufactures from neighbouring nations should be admitted to this approaching exposition, and asking the opinion of the manufacturers upon the subject. The answer he received, however, was not favourable, and he abandoned the idea; and it was this very circumstance, probably, which forced upon the Society of Arts, with Prince Albert at their head, the conviction that this wider and more generous field was the one they must adopt, if they would enlist the sympathies of the world in their project, and render it commercially self-supporting and independent.

His Royal Highness the Prince Albert, as President of the Society, had, of course, been fully informed, from time to time, of all these proceedings, which had received his Royal Highness's sanction and approval; but immediately after the termination of the session of 1849, the Prince took the subject under his own personal superintendence. He proceeded to settle the general principles on which the proposed Exhibition for 1851 should be conducted, and to consider the mode in which it should be carried out.

On the 29th June, 1849, the general outlines of the Exhibition were discussed by his Royal Highness; and from that day to the present time, accurate accounts of all proceedings have been kept, and the greater part of them printed and published. The minutes of a meeting of several members of the Society of Arts, held at Buckingham Palace, on the 30th June, set forth as follows:—

His Royal Highness communicated his views regarding the formation of a Great Collection of Works of Industry and Arts in London in 1851, for the purposes of exhibition, and of competition and encouragement.

His Royal Highness considered that such Collection and Exhibition should consist of the following divisions:—

Raw Materials.
Machinery and Mechanical Inventions.
Manufactures.
Sculpture and Plastic Art generally.

It was a matter of consideration whether such divisions should be made subjects of simultaneous exhibition, or be taken separately. It was ultimately settled that, on the first occasion at least, they should be simultaneous.

Various sites were suggested as most suitable for the building; which it was settled must be, on the first occasion at least, a temporary one. The Government had offered the area of Somerset House; or if that were unfit, a more suitable site on the property of the Crown. His Royal Highness pointed out the vacant ground in Hyde Park on the south side, parallel with, and between, the Kensington drive and the ride commonly called Rotten Row, as affording advantages which few other places might be found to possess. Application for this site could be made to the Crown.

It was a question whether this Exhibition should be exclusively limited to British Industry. It was considered that, whilst it appears an error to fix any limitation to the productions of machinery, science, and taste, which are of no country, but belong, as a whole, to the civilised world, particular advantage to British industry might be derived from placing it in fair competition with that of other nations.

It was further settled that, by offering very large premiums in money, sufficient inducement would be held out to the various manufacturers to produce works which, although they might not form a manufacture profitable in the general market, would, by the effort necessary for their accomplishment, permanently raise the powers of production, and improve the character of the manufacture itself.

The rest of the minute relates to the proposal for forming a Royal Commission to carry the project into effect; and the organisation of a subscription list in aid.

After another meeting at Osborne House, on the 14th July, same year, his Royal Highness, in order to bring the subject officially to the notice of the Government, addressed a letter to the Home Secretary, which opened a correspondence that eventuated in the appointment of a Royal Commission, dated 3rd January, 1850:—

"In this stage of the proceeding, (we quote again Mr. Cole's Introduction,) it became necessary to place the accomplishment of the undertaking, as far as possible, beyond a doubt. Having acquired experience, in 1845, of the difficulties to be encountered, the Council of the Society of Arts felt that the proposal must not be brought a second time before the public as an hypothesis, but that the only means of succeeding was to prove that they had both the will and the power to carry out the Exhibition. The Society had no funds of its own available for the advances necessary to be made. The outlay for a building upon the scale then thought of, and for preliminary expenses, was estimated at the least at £70,000.

"After much fruitless negotiation with several builders and contractors, an agreement was made between the Society of Arts and the Messrs. Munday, by which the latter undertook to deposit £20,000 as a prize fund, to erect a suitable building, to find offices, to advance the money requisite for all preliminary expenses, and to take the whole risk of loss on certain conditions. It was proposed that the receipts arising from the Exhibition should be dealt with as follows:—The £20,000 prize fund, the cost of the building, and five per cent. on all advances, were to be repaid in the first instance: the residue was then to be divided into three equal parts; one part was to be paid at once to the Society of Arts as a fund for future exhibitions; out of the other two parts all other incidental costs, such as those of general management, preliminary expenses, &c., were to be paid; and the residue, if any, was to be the remuneration of the contractors, for their outlay, trouble, and risk. Subsequently, the contractors agreed, that instead of this division they would be content to receive such part of the surplus, if any, as, after payment of all expenses, might be awarded by arbitration. This contract was made on 23rd August, 1849, but the deeds were not signed until the 7th November following.

"For the purpose of carrying the contract into execution on behalf of the Society, the Council nominated an Executive Committee of four members, who were afterwards appointed the Executive in the Royal Commission, and the contractors their own nominee. In thus making the contract with private parties for the execution of what, in fact, would become a national object, if the proposal should be entertained by the public, every care was taken to anticipate the public wishes, and to provide for the public interests. It was foreseen that if the public identified itself with the Exhibition, they would certainly prefer not to be indebted to private enterprise and capital for carrying it out. A provision was made with the contractors to meet this probability, by which it was agreed, that if the Treasury were willing to take the place of the contractors, and pay the liabilities incurred, the Society of Arts should have the power of determining the contract before the 1st February, 1850. In the event of an exercise of this power, the compensation to be paid to the Messrs. Munday for their outlay and risk was to be settled by arbitration.

"The Society of Arts having thus secured the performance of the pecuniary part of the undertaking, the next step taken was to ascertain the readiness of the public to promote the Exhibition. It has been shown that the proof of this readiness would materially influence Her Majesty's Government in consenting to the proposal to issue a Royal Commission to superintend the Exhibition. The Prince Albert, as President of the Society of Arts, therefore commissioned several members of the Society, in the autumn of 1849, to proceed to the 'manufacturing districts of the country, in order to collect the opinions of the leading manufacturers, and further evidence, with reference to a Great Exhibition of the Industry of all Nations to be held in London in the year 1851, in order that His Royal Highness might bring the results before Her Majesty's Government.' Commissioners were appointed, visits made, and reports of the results submitted to the Prince, from which it appeared that 65 places, comprehending the most important cities and towns of the United Kingdom, had been visited. Public meetings had been held, and local committees of assistance formed in them."

We pass over the intervening struggles,—the discouraging effects

CHARLES WENTWORTH DILKE, ESQ.,
Executive Commissioner.

DR. ROYLE,
Indian Commissioner.

RICHARD COBDEN, ESQ., M.P.,
Royal Commissioner.

LORD ROSSE,
President of the Royal Society, Royal Commissioner.

of the apathy, not disguised and not to be doubted, on the part of a large portion of the industrial class,—not only agricultural, but manufacturing; the tardy and niggardly filling up of the subscription list, which amounted in April, 1851, to only £75,000, of which about £65,000 had been paid in; the doubt as to the necessary funds being procured to pay for the purchase or hire of a suitable building for an entertainment to which the whole world have been invited. Suffice it to say, that on the 15th July, 1850, a charter of incorporation was granted to the Commissioners (which relieved the individual members of it from the responsibilities under which they had previously lain); and in August, a guarantee fund of £230,000 was subscribed by a limited number of individuals, some of whom were commissioners, upon security of which, the Bank of England consented to make such advances as might be required from time to time.

We come now to consider the arrangements by which the Great Exhibition has received not only a local habitation, but a name,—the origin and history of the Crystal Palace. We shall begin by quoting the statement in the Official Catalogue:—

"As early as January, 1850, the Commission named a Committee 'for all matters relating to the Building,' consisting of the Duke of Buccleuch, the Earl of Ellesmere, Mr. Barry, R.A., Mr. Cubitt, Pres. Inst. C.E., Mr. Stephenson, Mr. Cockerell, R.A., Mr. Brunel, and Mr. Donaldson.

"Mr. Cubitt was elected Chairman of this Committee, and from the earliest period to the opening of the Exhibition, gave daily and unremitting attention to the subject, at great personal sacrifice of his valuable time. On the 21st of February, 1850, the Building Committee reported favourably on the fitness of the present site in Hyde Park, which had been suggested in the early stages of the undertaking, and for the use of which it had been already announced that Her Majesty's permission had been obtained. The Committee ventured at once to recommend that upwards of 16 acres should be covered in; a bold step at that time (21st February), when no data whatever of the space likely to be filled had been received (*Min.* vii., p. 5). It was their opinion that it was desirable to obtain suggestions, by public competition, as to the general arrangements of the ground-plan of the Building, and public invitations were accordingly issued. They also reported, that when a plan for the general arrangement should have been obtained and approved, they would invite, by a second public notice, designs, accompanied by tenders, from the builders and manufacturers of the United Kingdom, for the construction of the Building, in the form, and according to the general arrangement, which should be fixed upon. In answer to the invitation to send in plans, upwards of 245 designs and specifications were submitted. Of these 38 were contributed by foreigners: France sending 27; Belgium 2; Holland 3; Hanover 1; Naples 1; Switzerland 2; Rhein Prussia 1; Hamburg 1; 128 by residents in London and its environs; 51 by residents in provincial towns of England; 6 by residents in Scotland; 3 by residents in Ireland; and 7 were anonymous. All these plans were publicly exhibited during a month, from the 10th of June, at the Institution of Civil Engineers, Great George Street, Westminster. The Building Committee reported on the merits of them, selecting two lists of the competitors. They considered the one 'entitled to favourable and honourable mention,' and the second 'entitled to further higher honorary distinction.' But they accompanied their report with the important announcement, that in their opinion there was no 'single plan so accordant with the peculiar objects in view, either in the principle or detail of its arrangement, as to warrant them in recommending it for adoption' (*Min.* xvii., p. 6). The Committee, therefore, submitted a plan of their own, and, assisted by Mr. Digby Wyatt, Mr. Charles Heard Wild, and Mr. Owen Jones, they prepared extensive working drawings, which were lithographed. They issued invitations for tenders to execute works in accordance with them, requesting from competitors, in addition, such suggestions and modification, accompanied with estimates of cost, as might possibly become the means of effecting a considerable reduction upon the general expense. In the actual instructions they stipulated that tenders in which changes were proposed, would be only entertained provided they were 'accompanied by working drawings and specifications, and fully priced bills of quantities.'

"The Building Committee published in detail the reasons, both of economy and taste, which had induced them to prepare plans for a structure of brick, the principal feature of which was a dome two hundred feet in diameter. Public opinion did not coincide in the propriety of such a building on such a site, and the residents in the neighbourhood raised especial objections. The subject was brought before both Houses of Parliament; and in the House of Commons, on the 4th July, 1850, two divisions took place on the question, whether the proposed site should be used at all for any building for the Exhibition. In the one division, the numbers in favour of the site were 166 to 47, and in the second 166 to 46. The Commissioners published, at considerable length, a statement of the reasons which had induced them to prefer the site, and there can be no doubt that the force of this document mainly influenced the large majority in both divisions.

"Whilst the plan of the Building Committee was under discussion, Mr. Paxton was led, by the hostility which it had incurred, to submit a plan for a structure chiefly of glass and iron, on principles similar to those which had been adopted and successfully tried by him at Chatsworth. Messrs. Fox, Henderson, and Co. tendered for the erection of the Building Committee's plan, and strictly in accordance with the conditions of tender, they also submitted estimates for the construction of the building suggested by Mr. Paxton, and adapted in form to the official ground-plan. An engraving of Mr. Paxton's original design was published in the *Illustrated London News*, 6th July, 1850, which, when compared with the building that has been actually erected, will show what changes were subsequently made. The Commissioners having fully investigated the subject, finally adopted, on the 26th July, Messrs. Fox, Henderson, and Co.'s tender to construct Mr. Paxton's building, as then proposed, for the sum of £79,800. Considerable modifications, additions, and improvements in the architectural details were subsequently made, which have raised the proposed original cost of the building. As soon as the decision was made, fresh working drawings had to be prepared, and every means taken for expediting the works. These were carried on under the superintendence of Mr. Cubitt, assisted by Mr. D. Wyatt, Mr. O. Jones, and Mr. C. Wild. The formal deed of contract was not signed until the 31st October, although the first iron column was fixed as early as the 26th September, 1850, the contractors having thereby incurred, in their preparations, a liability of £50,000 without any positive contract; in fact, great reciprocal confidence was manifested by the contracting parties. Whatever objections were entertained originally against the use of the site, gradually disappeared during the progress of the present building, and have become changed into positive approval and admiration, of the building itself and assent to the particular location of it. It should, however, be stated, that a deed of covenant to remove the building and give up the site within seven months after the close of the Exhibition, namely, before the 1st June, 1852, has been entered into between Her Majesty and the Commissioners. The deed was sealed on the 14th November, 1850."

Mr. Fox, at a dinner given to him at Derby, June 28th, made a speech, giving the following interesting particulars of the actual progress of the works:—

"In June, 1850, the Royal Commission invited contractors to tender for a building to be erected in Hyde Park, in conformity with plans and specifications prepared by the Building Committee.

"The Building, which was intended to consist principally of brick and iron, with a splendid dome in the centre, was considered of too permanent a nature for subsequent removal, and public opinion to this effect was very generally expressed.

"In the printed conditions of tender issued by the Building Committee, the following clause was introduced:—

"'Tenders for methods of construction other than those shown upon the drawings, and described in the specifications, will be entertained, but on condition only of their being accompanied by working drawings and specifications, and fully priced bills of quantities.'

"This invitation to parties to send in tenders, based not only on the Committee's plans, but upon such other designs as they might wish to submit, induced me to believe that a tender for a building of glass and iron, as suggested to me, for the first time, by Mr. Paxton, on the 22nd June, 1850, just twelve months ago, an engraving of which was published in the *Illustrated London News* on the 6th of July, would meet not only with the approbation of the Building Committee, but with that of the public at large; and I therefore went to Birmingham on the 28th June, and put in hand the drawings and specifications upon which our tender to the Committee was to be based.

"On the 2nd of July, Mr. Cole, having heard of our intention to make an offer for a building of the kind, and feeling strongly that the success of the Exhibition depended upon having an attractive and suitable building, came down to Birmingham, at his own suggestion, but with the permission of competent authority, to stimulate us to proceed, and to offer such hints in reference to the requirements of the case as would enable us to make the conception of Mr. Paxton conform strictly to the condition of tender required by the Commissioners, and therefore most likely to meet with the approbation of the Building Committee; and I am of opinion, that to his spirited advice we are mainly indebted for obtaining an impregnable *locus standi* on the merits of our case.

"In all this I had the co-operation of my partner, Mr. Henderson, who, feeling with me the value of Mr. Cole's suggestions, and the

SIR STAFFORD NORTHCOTE, BART.,
Secretary to the Royal Commissioners.

HENRY COLE, ESQ.,
Executive Commissioner.

MATTHEW DIGBY WYATT, ESQ.,
Secretary to the Executive Committee.

OWEN JONES, ESQ., R.A.,
Author of "The Alhambra," Decorator of the Crystal Palace.

great importance, in the preparation of these drawings, of conforming as much as possible to the arrangements adopted by the Committee in the plan upon which they had invited tenders, proposed the addition of the transept, in the propriety of which Mr. Paxton, after due consideration, entirely concurred.

"Before completing our tender, and with a view to a more precise appreciation of the magnitude of a building covering 18 acres—1850 feet long, 408 feet wide, and 64 feet high, irrespective of the arched roof of the transept—I walked out one evening into Portland-place; and there setting off the 1850 feet upon the pavement, found it the same length within a few yards; and then, considering that the building would be three times the width of that fine street, and the nave as high as the houses on either side, I had presented to my mind a pretty good idea of what we were about to undertake, and I confess that I considered the difficulties to be surmounted in constructing that great Palace were of no ordinary kind; but feeling confident that, with great energy, good arrangements, and a hearty co-operation on the part of our extensive and well-disciplined staff, it might be accomplished, and that upon it depended, in all probability, the success of the Exhibition, we determined to undertake the responsibility; and the opening on the 1st May has proved the correctness of our conclusions.

"The plans and specifications prepared by us in great haste were submitted to the Commissioners, together with a tender, on the 10th July; but, though sufficient to enable us to bring the subject before them, and to convey to their minds an idea of what we proposed to erect, they were necessarily very incomplete, and did not contain either sufficient architectural or mechanical detail to admit of their being used in the execution of the works. The arched roof was afterwards added to the design, and submitted to the Commissioners on the 15th July, with the view of getting over a difficulty which existed in consequence of the elm-trees being too tall to be covered by the flat roof proposed by Mr. Paxton.

"These trees were, as Professor Cowper stated in his admirable lecture on the last day of the past year, 'John Bull's Trees of Liberty,' upon which, for some reason, he had set his heart in preference to all others, and would not consent to their removal. For the expense attending the addition of the arched roof to the transept, Fox, Henderson, and Co. did not increase the amount of their former tender, and it was consequently executed at their sole expense.

"The Building Committee, having had the matter under their consideration from the 15th to the 25th July, resolved unanimously to recommend the Commissioners to accept our offer for the building with the arched roof, and nothing could be more disinterested than their conduct in setting aside the drawings and specifications which, with much labour, they had prepared, and adopting others which, though laid before them in so imperfect a state, presented to their minds, as experienced engineers and architects, the mode of constructing a building of iron and glass better fitted for the purposes of the Exhibition.

"On the recommendation of the Building Committee, the Commissioners on the 26th July were pleased to signify their wish for us to construct the building, but were met by a difficulty which threatened to postpone for a year, if not to put an end to the Exhibition altogether.

"The Solicitor to the Treasury gave as his opinion that, until the Commissioners had obtained a royal charter, they could not legally proceed, and were therefore not in a position to give an order to any one. These circumstances were explained to us by Lord Granville on the 26th of July, in the presence of the Commissioners, who at the same time told us that it was their fixed intention to apply to Government for the charter, and he had every reason to believe it would be granted; and having informed us that as soon as they were a legally constituted body they would probably conclude a contract with Fox, Henderson, and Co., finished by asking whether, under these circumstances, we should consider it running too great a risk to enter at once upon the execution of the work, as otherwise many weeks would unavoidably be lost, and the chance of opening the Exhibition on the 1st of May placed beyond possibility. In reply to his Lordship's inquiry, seeing the imperative necessity for immediate action, and desiring to render all the assistance in our power in furtherance of the important objects of the Exhibition, we expressed our willingness to run the risk, whatever it might be, and without waiting for the charter, commenced at once the drawings and the necessary operations for the erection of the building.

"As the time for the execution of the building was so extremely limited, and being well aware, from experience, that when matters of business had to be decided by a committee composed of many persons, much valuable time was generally wasted, we requested the Commissioners, instead of referring us to the Building Committee, to select one of its members, either the chairman, Mr. Cubitt, President of the Institution of Civil Engineers, Mr. Robert Stephenson, or Mr. Brunel, and give him absolute power to settle with us finally all matters connected with the arduous task we were then willing to enter upon. The Commissioners, appreciating the importance of this request, appointed Mr. Cubitt to fill this office.

"It was now that I commenced the laborious work of deciding upon the proportions and strengths required in every part of this great and novel structure, so as to ensure that perfect safety essential in a building destined to receive millions of human beings—one so entirely without precedent, and where mistakes might have led to the most serious disasters. Having satisfied myself on these necessary points, I set to work and made every important drawing of the building as it now stands, with my own hand; and it was no small source of gratification to me, when asking Mr. Cubitt to look over the drawings I had prepared, to find that he not only had no desire to suggest alterations, but expressed his entire approbation of them all.

"Perhaps the most difficult and hazardous, and certainly the most interesting portion of the work, was raising the sixteen ribs of the transept to their places. A month was the shortest time assigned by any one for this operation. We commenced on the 4th December, and succeeded in raising two in the course of that day.

"Two more were safely deposited in their places in the presence of his Royal Highness Prince Albert on the following day, and the last pair on December the 12th; so that the sixteen ribs were all placed in eight working days."

The building in its general arrangement resembles the distribution of parts in a cruciform cathedral with double aisles, consisting of a vast nave, 72 feet wide, 64 feet high, running from east to west, 1848 feet in length. This nave is crossed at right angles near the centre of its length by a transept of the same width, and 408 feet long. The roof of this transept is semi-cylindrical, the curve commencing at a height of 68 feet. On each side, both of the nave and transept, run aisles 24 feet in width and 64 in height, with galleries covering the whole width of the aisles at a height of 24 feet from the ground. Beyond these first aisles, and parallel with them, at a distance of 48 feet, are second aisles of similar width, and similarly covered for their whole width with galleries on the same level as those over the first aisles. In order to communicate from one gallery to another, bridges at frequent intervals span the 48-feet avenues, and divide them into courts, each of which has been so arranged as to present an *ensemble* to the eye of the spectator looking down upon it from the galleries. The avennes of 48 feet, which we have described as thus subdivided, and the second aisles, are roofed over at a height of 44 feet from the ground. The remaining portion of the building consists of one story only 24 feet high, in which there are of course no galleries. Ten double staircases, each 8 feet wide, give access to the galleries.

The total area of the ground floor is 772,784 square feet, and that of the galleries 217,100 square feet. The galleries extend nearly a mile in length. The total cubic contents of the building are about 33,000,000 feet. There are nearly 2300 cast-iron girders, 23 feet 4 inches long, and 3 feet deep; and 358 wrought-iron trusses for supporting the galleries and roof; 30 miles of gutters for carrying the roof-water to the columns which support the roof, and 202 miles of sash bars.

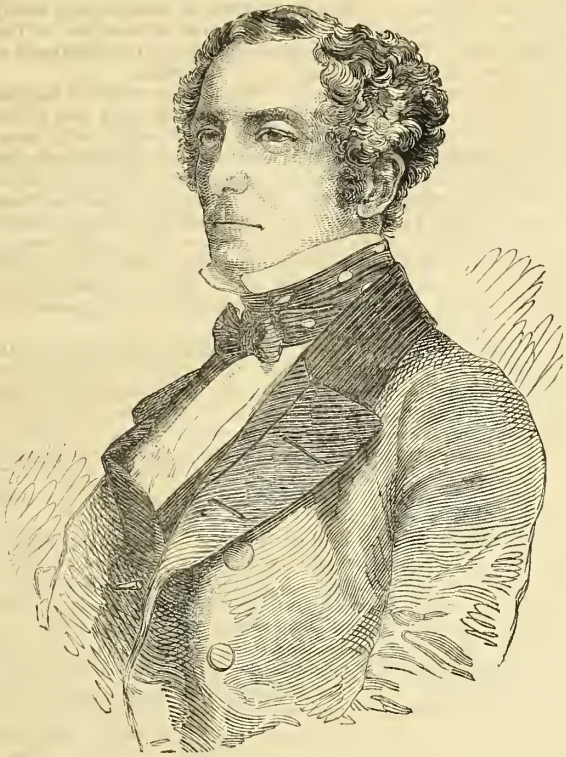
Commodious refreshment-rooms, &c., have been provided around the trees at the northern extremity of the transept, and adjoining open courts towards the eastern and western extremities of the building, where the presence of the groups of trees dictated their location. The offices of the Executive Committee adjoin the southern entrance. In addition to the southern or principal entrance, there are two others, one at the east and the other at the west end of the building. Fifteen exit doors permit visitors to leave the building.

Water is supplied in abundance by the Chelsea Water-works Company, not only to guard against contingencies by fire, but to supply the numerous fountains which are distributed about the building.

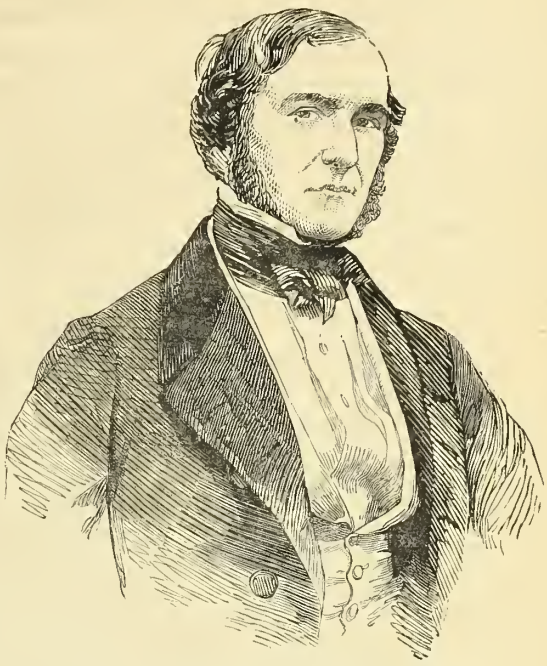
Ventilation is effected and regulated by means of "louvres," consisting of metal blades fixed in wooden frames. These louvres resemble Venetian blinds in their action. An area of not less than 50,000 feet, superficial, of ventilating surface is thus distributed generally over the building. An ingenious arrangement of cranks, &c., so connects these louvres one with another, that a single man can open or close with great ease no less than 600 feet, superficial, by one motion of the arm.

The decoration of the building, which is in white and blue stripes, relieved with red, was designed by Owen Jones, Esq.

To give an idea of the enormous extent of the building, it may be noticed that the width of the main avenue is within ten feet



FRANCIS FULLER, ESQ.,
Executive Commissioner.



THE RIGHT HON. W. E. GLADSTONE, M.P.,
Royal Commissioner.

THOMAS BAZLEY, ESQ.,
President of the Manchester Chamber of Commerce, Royal Commissioner.

MR. FOX,
Builder of the Crystal Palace.

double that of Saint Paul's Cathedral, whilst its length is more than four times as great. The walls of St. Paul's are fourteen feet thick, those of the "Crystal Palace" only eight inches. St. Paul's occupied 35 years in building, whilst the Hyde Park building occupied less than half that number of weeks; the celerity of the construction has been most remarkable. As many as 308 girders have been delivered on the ground in one week. Seven of the great trusses of the nave were raised in one day. Each man fixed about 200 superficial feet of glass per day. In order to perform these marvels, it was necessary to devise and employ various contrivances for economising labour, such as the sash-bar machine, the gutter machine, the morticing machine, the painting machine, the glazing machine, besides many others of an equally ingenious nature. The average number of workmen employed was about 1800, amongst whom about £2500 was weekly paid in wages. Even in the payment of the workmen ingenious machinery was called into requisition, by which it was found possible to make nearly 2000 distinct payments within the space of two hours.

With regard to the internal arrangements as they appeared during the period the Exhibition was open, a brief survey may be sufficient as a record for future reference.

Upon entering at the eastern end of the building, the productions of the United States were found arranged upon the north and south sides. Adjoining the United States on the north side, were the productions of Russia; Norway, Sweden, and Denmark occupying the space opposite to Russia, upon the south side. Exhibitors from Northern Germany came next, on the north side to Russia, and upon the south to Denmark. The productions of the Zollverein occupied a considerable space upon both sides, adjoining to those of Northern Germany. Articles contributed by Austriau exhibitors came next, also occupying a portion of each side of the central passage. The contributions from Holland joined, on the north side, the Austrian productions. Belgium next occupied a fair amount of space upon each side. France had 240 feet of frontage upon the north, and about 200 feet upon the south side. To Portugal and Spain were allotted a space upon the north side, as well as to Italy. Switzerland exhibited her productions upon the south side, and by their side were arranged the articles sent from Brazil and Mexico. Egypt and Greece occupied a space upon the north side, near to the transept, aud in immediate proximity to some of the rich productions of Turkey, which stood at the point of junction with the transept. China had a frontage upon the south side, and a portion of that of the transept. Persia and Arabia adjoined to Greece and Turkey, in the north transept; whilst Tunis occupied a portion of the south transept.

Crossing the transept westward, the visitor found himself amid the productions of British India, Ceylon, and the rest of our colonies, from which he passed to the productions of the United Kingdom, arranged in various ways, according to their classes; the productions of Ireland being near the extreme west of the nave. The machinery in motion occupied the north-western part of the building; the steam-engine, of upwards of 100 horse power, being outside the building. The galleries were allotted to the respective countries in almost the same proportions as the space upon the ground floor. All the lighter and more elegant articles, including the plate and jewellery of the British contributors, were displayed in the galleries, the heavier articles being of course exhibited upon the ground floor. Sculpture and the fine arts occupied a position south of the west transept. Articles of statuary and sculpture were also placed upon each side of the central passage, small fountains and other ornamental works being placed in the centre. At the centre of the intersection of the transept and nave, or central passage, was the very beautiful glass fountain by Messrs. Osler.

Close of the Exhibition, 11th October.—Report on the Awards of Juries, 15th October.

The Great Exhibition having been open to the public 141 days, was finally closed on the 11th October. The only incident which marked the event, was the striking up, at five o'clock, of the National Anthem by all the organs, accompanied by many voices in all parts of the crowded avenues. On Monday and Tuesday, the 13th and 14th, the Crystal Palace was thrown open to exhibitors and their friends, who were admitted by tickets without charge; and on Wednesday, the 15th, the history of the Great Exhibition 1851 was brought to a final close, with a slight business-like ceremony, in which Prince Albert, as the President, received the reports of the juries, and addressed a speech in reply. This ceremony took place upon a temporary daïs in the middle of the transept, (the Crystal Fountain having been previously removed,) and the whole building was crowded with exhibitors and others admitted by tickets.

The National Anthem was then sung; after which the Bishop of London read a prayer of thanksgiving. This was followed by the Hallelujah Chorus, at the close of which the Prince and Commissioners left the platform, and the business of the day terminated.

ANALYSIS OF THE AWARDS.

An examination of the aggregate result of the labours of the jurors, shows that the number of awards of all classes—council and prize medals, and "honourable mentions"—is 5084; of this number 2039 have been awarded to the United Kingdom, and 3045 to the foreign Exhibitors. Upon analysing these lists, we find that the proportion of prizes awarded in the six great groups which included the whole of the jurors, is as follows:—

RAW MATERIALS.—CLASSES I. TO IV.

	British.	Foreign.	Total.
Council medals . .	6	16	22
Prize medals . . .	125	437	562
Honourable mentions .	131	535	666
Total . . .	262	988	1250

MACHINERY.—CLASSES V. TO X.

Council medals . .	52	36	88
Prize medals . . .	301	191	492
Honourable mentions .	51	114	165
Total . . .	404	341	745

TEXTILE FABRICS.—CLASSES XI. TO XX.

Council medals . .	1	2	3
Prize medals . . .	337	498	835
Honourable mentions .	185	277	462
Total . . .	523	777	1300

METALLIC, VITREOUS, AND CERAMIC MANUFACTURES.—CLASSES XXI. TO XXV.

Council medals . .	14	21	35
Prize medals . .	312	214	526
Honourable mentions .	208	199	407
Total . . .	534	434	968

MISCELLANEOUS MANUFACTURES.—CLASSES XXVI. TO XXIX.

Council medals . .	4	10	14
Prize medals . . .	142	232	374
Honourable mentions .	100	154	254
Total . . .	246	396	642

FINE ARTS.

Council medals . .	2	2	4
Prize medals . . .	27	60	87
Honourable mentions .	41	47	88
Total . . .	70	109	179

Besides the medals, the Juries have, in a few special cases, granted money awards, of which the following is a list:—

MONEY AWARDS.

— Alex. Birnie, United Kingdom—for having exhibited a complete set of fishing nets, lines, and hooks, for deep sea fishing —£50.

— Joseph Bothway, United Kingdom—for having exhibited models of his improvements in the construction of blocks, combining strength and other advantages with much less weight —£50.

159 Daniel Harvey, United Kingdom—for having exhibited a model of the "Victoria and Albert" yacht, executed by him—being a fine specimen of workmanship—£40.

174 — Dempster, United Kingdom—for an ingenious system of signals for merchant ships—£20.

468 G. F. Greiner, United Kingdom—for his new and useful method of bringing into unison the strings of each choir of the pianoforte; also for his invention of a new and mechanical contrivance for pianos, combining the advantage of Erard's machine, with greater construction and durability—£50.

— J. S. Wood, United States—for the expenses incurred in constructing his piano violin—£50.

101 F. Retor, Switzerland—to enable him to carry on further experiments to test the isochronism of spirals, his invention of a new and ingenious free spring escapement being particularly adapted for that purpose—£50.

NOTE.—*The Jury award the sum of £10 each to the following subjects.*

106 Ann Harvey (Belfast), United Kingdom—hand-spun flax-yarn.

546 Hempen Spinning School (for a little girl 10 years of age), Prussia—spun flax-yarn.

— Jane McGill (Belfast), United Kingdom—hand-spun flax-yarn.

237 J. Bamford, United Kingdom—fine light gauze flannels.

97 E. Budden, United Kingdom—the workman who bound an album, very elaborately ornamented, in which taste and good work are displayed.

91 R. Neil, United Kingdom—for the care, industry, and perseverance displayed in binding an imperial 4to. Bible in cream Morocco, under great disadvantages; the work was executed at his own home after his daily occupation, by gas-light in the winter; and notwithstanding these difficulties, a considerable degree of excelleuce is attained.

STATISTICS OF THE EXHIBITION.

NUMBER OF VISITORS.

In the month of May the number of visitors was	734,782
In June	1,133,116
In July	1,314,176
In August	1,023,435
In September	1,155,240
In October, up to the 11th instant	841,107
Grand total	6,201,856

The total receipts were as follows, up to the close of the Exhibition:—

Public subscriptions	£64,344 0 0
Privilege of printing	3,200 0 0
Privilege of supplying refreshments	5,500 0 0
Amount received for season tickets up to 1st of May	40,000 0 0
Royalty of 2*d.* per copy on Catalogues	
Total funds in hand on the 1st of May	£113,044 0 0
Amount received at the doors up to August 30	252,141 9 6
Ditto up to the end of September	62,007 12 0
Ditto up to Saturday, October 11	41,922 11 6
Grand total	£469,115 13 0

CURIOUS FACTS CONNECTED WITH THE EXHIBITION.

Of the money received at the doors, £275,000 was in silver, and £81,000 in gold. The weight of the silver coin so takeu (at the rate of 28lb. per £100) would be 35 tons, and its bulk 900 cubic feet! The rapid flow of the coin into the hands of the money-takers prevented all examination of each piece as it was received, and £90 of bad silver was taken, but only one piece of bad gold, and that was a half-sovereign. The half-crown was the most usual bad coin; but a much more noticeable fact is, that nearly all the bad money was taken ou the half-crown and five-shilling days. The cash was reeeived by eighteen money-takers: on the very heavy days six extra ones being employed during the busiest hours. From them it was gathered by three or four money-porters, who carried it to four collectors, charged with the task of counting it. From them it went to two tellers, who verified the sums, and handed it to the final custody of the chief financial officer, Mr. Carpenter, who locked each day's amount in his peculiar iron chests in the building till next morning, when, in boxes, each holding £600, it was borne off in a hackney-cab in charge of a Bauk of England clerk and a Bank porter. The money was received in all forms, ranging betweeu farthings and ten-pound notes. Contrary to the notices exhibited, change was giveu. Occasionally, foreigners gave napoleons, and these coins being mistaken for sovereigns, they received nineteen shillings out, and liberty of admission into the bargain. The moneys of Ameriea, Hamburg, Germany, and France, were often tendered and taken. The total number of visitors from the 1st of May to the 11th of October was 6,063,986.

Return showing for each day, from May 1st to October 11th, the estimated Daily Number of Visitors to the Exhibition, the Receipts at the Doors, and the Largest Number of Persons in the Building at any one time.

Date.	Day of the Week.	Number of persons paying at the doors. Number.	Entrance Fee.	Amount received at the doors. £	s.	d.	Estimated Number of persons entering with Season Tickets.	Total Number who entered daily, including Staff and Exhibitors' Attendants, as estimated by the Police.		Largest Number of persons in the Building at any one time.
			s. d.							
May 1	Thursday						19,000	25,000		
2	Friday ...	560	20 0	560	0	0	15,000	15,560		
3	Saturday	482	20 0	482	0	0	15,000	15,482		
		1,042		1,042	0	0	49,000		56,042	
5	Monday..	5,452	5 0	1,362	19	0	12,304	17,756		
6	Tuesday .	5,834	5 0	1,458	10	0	12,321	18,155		
7	Wednesd.	7,163	5 0	1,790	15	0	12,314	19,477		
8	Thursday	8,072	5 0	2,018	0	0	13,000	21,072		
9	Friday ...	7,298	5 0	1,824	10	0	12,316	19,614		
10	Saturday	7,375	5 0	1,843	15	0	14,801	22,176		
		41,194		10,298	9	0	77,056		118,250	
									174,292	
12	Monday..	6,390	5 0	1,597	10	0	12,932	21,322		
13	Tuesday.	8,918	5 0	2,229	10	0	13,027	23,945		
14	Wednesd.	8,259	5 0	2,064	15	0	13,131	23,390		
15	Thursday	9,704	5 0	2,426	0	0	13,527	25,231		
16	Friday ...	10,226	5 0	2,556	10	0	13,804	26,030		
17	Saturday	9,889	5 0	2,472	5	0	13,700	25,589		
		53,386		13,346	10	0	80,121		145,507	
									319,799	
19	Monday..	9,380	5 0	2,345	0	0	13,740	25,120		
20	Tuesday..	13,443	5 0	3,360	15	0	13,800	29,243		
21	Wednesd.	14,049	5 0	3,512	5	0	14,200	30,249		
22	Thursday	15,892	5 0	3,797	11	0	13,500	31,393		
23	Friday	16,382	5 0	4,095	10	0	14,000	32,352		
24	Saturday	20,312	5 0	5,078	0	0	22,200	44,512		
		89,458		22,189	1	0	91,440		192,869	
									512,668	
26	Monday..	18,402	1 0	920	2	0	7,000	25,402		
27	Tuesday..	27,957	1 0	1,347	17	0	2,043	30,000		
28	Wednesd.	37,184	1 0	1,869	4	0	3,421	40,605		
29	Thursday	47,518	1 0	2,375	18	0	4,370	51,888		
30	Friday	22,713	2 6	2,839	9	0	22,956	45,669		
31	Saturday	7,083	5 0	1,770	15	0	21,467	28,550		
		160,857		11,123	5	0	61,257		222,114	
									734,782	
June 2	Monday..	42,581	1 0	2,129	1	0	3,709	26,290		
3	Tuesday..	48,302	1 0	2,415	2	0	2,327	50,629		
4	Wednesd.	50,016	1 0	2,500	16	0	4,619	54,635		
5	Thursday	51,337	1 0	2,566	17	0	3,917	55,254		
6	Friday	20,468	2 6	2,558	11	0	5,666	26,134		21,606
7	Saturday	6,095	5 0	1,523	15	0	6,891	12,086		8,822
		218,799		13,694	2	0	27,129		245,928	
									980,710	
9	Monday..	48,714	1 0	2,436	4	0	5,480	54,194		46,167
10	Tuesday..	45,444	1 0	2,272	2	0	4,253	49,697		46,159
11	Wednesd.	43,219	1 0	2,160	19	0	4,535	47,754		37,823
12	Thursday	44,667	1 0	2,233	7	0	3,651	48,318		38,146
13	Friday	17,650	2 6	2,206	5	0	6,870	24,520		12,555
14	Saturday	6,539	5 0	1,634	15	0	7,563	14,102		10,025
		206,233		12,943	12	0	32,352		238,585	
									1,219,295	
16	Monday..	57,089	1 0	2,854	9	0	6,680	63,769		46,374
17	Tuesday..	63,821	1 0	3,191	1	0	4,333	68,154		54,422
18	Wednesd.	57,947	1 0	2,897	7	0	4,716	62,663		52,673
19	Thursday	59,692	1 0	2,984	12	0	4,171	63,863		46,792
20	Friday	22,553	2 6	2,819	4	6	9,281	31,834		19,405
21	Saturday	6,698	5 0	1,674	10	0	6,034	12,732		8,607
		267,800		16,421	3	6	35,215		303,015	
									1,522,310	
23	Monday..	60,331	1 0	3,016	11	0	7,224	67,555		55,379
24	Tuesday..	63,732	1 0	3,186	12	0	4,662	68,294		54,097
25	Wednesd.	53,834	1 0	2,661	14	0	4,611	58,445		45,731
26	Thursday	54,456	1 0	2,722	10	0	3,331	57,781		45,631
27	Friday	23,754	2 6	2,969	6	0	5,279	29,033		21,613
28	Saturday	6,363	5 0	1,590	15	0	5,138	11,501		10,645
		262,464		16,177	8	0	30,245		292,709	
									1,815,019	
30	Monday..	49,396	1 0	2,469	16	0	3,483	52,879		46,090
July 1	Tuesday..	48,590	1 0	2,429	10	0	2,479	51,069		42,717
2	Wednesd.	47,278	1 0	2,363	18	0	2,121	49,399		39,873
3	Thursday	53,039	1 0	2,651	19	0	2,599	55,638		44,890
4	Friday	20,737	2 6	2,592	2	6	5,270	26,007		20,945
5	Saturday	6,263	5 0	1,565	15	0	5,484	11,747		8,276
		225,303		14,073	0	6	21,436		246,739	
									2,061,758	

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			s. d.	£ s. d.			
		Brought over				2,061,758	
July 7	Monday..	57,042	1 0	2,852 2 0	4,628	61,670	50,605
8	Tuesday..	63,385	1 0	3,169 5 0	2,577	65,962	54,016
9	Wednesd.	54,206	1 0	2,710 6 0	3,849	58,055	48,512
10	Thursday	59,160	1 0	2,958 0 0	2,332	61,492	51,284
11	Friday....	25,167	2 6	3,145 17 6	4,900	30,067	23,563
12	Saturday	6,359	5 6	1,589 15 0	4,822	11,181	8,433
						288,427	
		265,319		16,425 5 6	23,108		
						2,350,185	
14	Monday..	59,148	1 0	2,957 8 0	3,546	62,694	52,128
15	Tuesday..	70,041	1 0	3,502 1 0	4,081	74,122	61,640
16	Wednesd.	58,204	1 0	2,910 4 0	2,422	60,626	50,553
17	Thursday	60,465	1 0	3,023 5 0	3,281	63,746	51,336
18	Friday....	30,099	2 6	3,762 7 6	5,239	35,338	27,700
19	Saturday	5,443	5 0	1,360 15 0	3,884	9,327	7,121
						305,853	
		283,400		17,516 0 6	22,453		
						2,656,038	
21	Monday..	66,767	1 0	3,338 7 6	3,873	70,640	58,541
22	Tuesday..	64,722	1 0	3,236 2 0	3,439	68,161	55,264
23	Wednesd.	48,774	1 0	2,438 14 0	1,825	50,599	42,390
24	Thursday	45,721	1 0	2,286 1 0	1,737	47,458	40,881
25	Friday....	23,872	2 6	2,984 0 0	3,010	26,882	21,325
26	Saturday	5,912	5 0	1,478 0 0	4,487	10,399	7,946
						274,139	
		255,768		15,761 4 6	18,371		
						2,930,177	
28	Monday..	63,893	1 0	3,194 13 6	3,277	67,170	54,933
29	Tuesday..	65,630	1 0	3,281 10 0	2,866	68,496	57,677
30	Wednesd.	56,706	1 0	2,835 6 0	1,676	58,382	47,499
31	Thursday	56,556	1 0	2,827 15 0	1,293	57,849	46,315
Aug. 1	Friday'...	22,817	2 6	2,852 2 6	4,080	26,897	21,198
2	Saturday	5,298	5 0	1,324 10 0	4,427	9,725	7,167
						288,519	
		270,980		16,315 18 0	17,619		
						3,218,696	
4	Monday..	60,138	1 0	3,006 18 0	2,493	62,631	53,254
5	Tuesday..	64,729	1 0	3,236 9 0	3,340	68,069	56,931
6	Wednesd.	56,664	1 0	2,833 4 0	2,475	59,139	44,368
7	Thursday	57,196	1 0	2,850 16 0	2,922	60,118	48,385
8	Friday....	15,365	2 6	1,920 12 6	3,101	18,466	14,630
9	Saturday	12,678	2 6	1,584 15 0	5,670	18,348	14,792
						286,771	
		266,770		15,441 14 6	20,001		
						3,505,467	
11	Monday..	56,599	1 0	2,829 19 0	2,035	58,634	49,038
12	Tuesday..	56,539	1 0	2,826 19 0	2,015	58,554	49,167
13	Wednesd.	45,290	1 0	2,264 10 6	2,527	47,817	39,343
14	Thursday	47,720	1 0	2,386 0 0	1,732	49,452	39,589
15	Friday....	17,209	2 6	2,151 2 6	3,650	20,859	16,623
16	Saturday	12,739	2 6	1,592 7 6	4,002	16,741	13,646
						252,057	
		236,096		14,050 18 6	15,961		
						3,757,524	
18	Monday..	50,136	1 0	2,506 16 0	1,389	51,525	43,612
19	Tuesday..	55,476	1 0	2,773 16 0	1,603	57,079	47,695
20	Wednesd.	44,348	1 0	2,217 8 0	219	44,567	35,499
21	Thursday	49,402	1 0	2,470 2 6	1,080	50,482	41,633
22	Friday....	15,661	2 6	1,957 12 6	2,317	17,978	13,927
23	Saturday	11,479	2 6	1,434 17 6	3,429	14,908	11,607
						236,539	
		226,502		13,360 12 6	10,037		
						3,994,063	

Date.	Day of the Week.	Number of persons paying at the doors. Number.	Entrance Fee.	Amount received at the doors.	Estimated Number of persons entering with Season Tickets.	Total Number who entered daily, including Staff and Exhibitors' Attendants, as estimated by the Police.	Largest Number of persons in the Building at any one time.
			s. d.	£ s. d.			
		Brought over				3,994,063	
Aug 25	Monday..	48,734	1 0	2,436 14 0	287	49,021	41,414
26	Tuesday..	49,870	1 0	2,493 10 0	1,441	51,311	44,190
27	Wednesd.	37,921	1 0	1,896 1 0	307	38,228	31,618
28	Thursday	43,350	1 0	2,167 10 0	894	44,244	37,412
29	Friday....	12,479	2 6	1,559 17 6	3,111	15,590	12,771
30	Saturday	10,454	2 6	1,306 15 0	2,598	13,052	10,855
						211,446	
		202,808		11,860 7 6	8,638		
						4,205,509	
Sept. 1	Monday..	49,309	1 0	2,465 9 0	924	50,233	43,170
2	Tuesday..	48,155	1 0	2,407 15 0	1,711	49,866	42,115
3	Wednesd.	41,612	1 0	2,080 12 6	305	41,917	36,005
4	Thursday	42,758	1 0	2,137 18 0	1,451	44,209	37,209
5	Friday....	12,747	2 6	1,593 7 6	2,979	15,726	12,753
6	Saturday	9,590	2 6	1,198 15 0	3,082	12,672	10,857
						214,623	
		204,171		11,883 17 0	10,452		
						4,420,132	
8	Monday..	55,357	1 0	2,767 17 0	1,495	56,852	48,843
9	Tuesday..	55,901	1 0	2,795 1 0	2,114	58,015	50,651
10	Wednesd.	47,905	1 0	2,395 5 6	2,201	50,106	41,774
11	Thursday	52,759	1 0	2,637 19 6	2,068	54 827	46,050
12	Friday....	15,120	2 6	1,890 0 0	2,8		14,528
13	Saturday	11,614	2 6	1,451 15 0	4,6		14,002
						4,032	
		238,656		13,937 18 0	15,376		
						74,164	
15	Monday..	58,670	1 0	2,933 10 6	18,27	60,497	52,268
16	Tuesday..	60,169	1 0	3,008 9 0	2,453	62,622	54,127
17	Wednesd.	50,021	1 0	2,501 1 0	2,736	52,757	44,427
18	Thursday	56,201	1 0	2,810 1 6	2.399	58,600	49,555
19	Friday....	17,317	2 6	2,227 2 0	3,671	21,488	18,205
20	Saturday	12,837	2 6	1,604 13 0	4,529	17,366	14,802
						273,330	
		255,715		15,084 17 0	17,615		
						4,947,494	
22	Monday..	57,256	1 0	2,863 6 0	2,098	59,354	50,108
23	Tuesday..	57,187	1 0	2,859 7 0	3,195	60,382	50,246
24	Wednesd.	51,452	1 0	2,572 12 0	3,088	54,540	46,662
25	Thursday	54,514	1 0	2.725 14 0	2,647	57,161	48,007
26	Friday....	19,326	2 6	2,415 15 0	4,368	23,694	20,034
27	Saturday	14,817	2 6	1,852 2 6	5,419	20,236	16,541
						275,367	
		254,552		15,288 16 6	20,815		
						5,222,861	
29	Monday..	65,915	1 0	3,295 15 0	2,627	68,542	59,089
30	Tuesday..	66,064	1 0	3,303 4 0	3,282	69,346	60,039
Oct. 1	Wednesd.	56,611	1 0	2,830 11 0	2,460	59,071	51,570
2	Thursday	61,612	1 0	3,080 12 6	2,686	64,298	55,379
3	Friday....	26,733	2 6	3,354 3 0	5,218	31,951	27,626
4	Saturday	21,902	2 6	2,862 14 0	7,738	29,640	26,074
						322,848	
		298,837		18,726 19 6	24,011		
						5,545,709	
6	Monday .	103,506	1 0	5,175 16 0	4,299	107,815	89,242
7	Tuesday..	104,630	1 0	5,231 10 0	5,285	109,915	93,224
8	Wednesd.	105,663	1 0	5,283 3 0	4,097	109,760	87,275
9	Thursday	86,887	1 0	4,344 7 6	3,926	90,813	72,344
10	Friday....	39,312	2 6	4,914 1 6	7,601	46,913	39,767
11	Saturday	38,765	2 6	4,845 13 6	14,296	53,061	45,067
						518,277	
		478,773		29,794 11 6	39,504		
						6,063,986	

JAMES WADE, Registrar.

MONETARY STATISTICS.

Altogether more than half-a-million of money has been received by the Exhibition authorities, the exact sum being £505,107 5*s.* 7*d.* This amount includes some very curious items. More than £400 were paid for the use of the washing-places, and no less than £2427 on account of other essential conveniences attached to the building. The small fee exacted for taking care of sticks and umbrellas produced £831 3*s.* 3*d.*; the royalty taken upon the shilling catalogues would, if enforced, have turned £3200 into the Exhibition exchequer; whilst a still larger sum—£5500, resulted from the sale of the privilege to feed the visitors with buns, pound-cake, ices, ginger-beer, and the other dainties of the refreshment-counters. Of the money received at the doors, £275,000 was in silver, and £81,000 in gold. The weight of the silver coin so taken (at the rate of 28 lbs. per £100) would be 35 tons, and its bulk 900 cubic feet! The rapid flow of the coin into the hands of the money-takers prevented all examination of each piece as it was received; £90 of bad silver was taken, but only one piece of bad gold, and that was a half-sovereign. The half-crown was the most usual bad coin; but a much more noticeable fact is, that nearly all the bad money was taken on the half-crown and five-shilling days. The cash was received by eighteen money-takers on the very heavy days, six extra ones being employed during the busiest hours. From them it was gathered by three or four money porters, who carried it to four collectors, charged with the task of counting. From them it went to two tellers, who verified the sum and had it to the final custody of the chief financial officer, Mr. G. F. Carpenter, who locked each day's amount in his peculiar iron chests in the building till next morning, when in boxes, each holding £600, it was borne off in a hackney cab in charge of a Bank of England clerk and a Bank porter. The first shilling day produced the smallest daily amount received, which was £920 2*s.*; the last shilling day but one afforded the largest daily taking, it being £5,283 8*s.* The last week of all gave the heaviest receipts. They amounted to £29,794 11*s.* 6*d.* The lightest week was the first 5*s.* week, £10,298 9*s.*: the next lightest week being the first shilling week, when £11,123 5*s.* was taken. This money was received in all forms, ranging between farthings and ten-pound notes. Contrary to the notices exhibited, change was given. Occasionally foreigners gave napoleons, and these coins being mistaken for sovereigns, they received nineteen shillings out, and liberty of admission into the building. The moneys of America, Hamburg, Germany, and France were often tendered and taken.

Reed and Pardon, Printers, Paternoster Row, London.